STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 171462

TO: David Fox **Location: REM/2C09/2C18** **Art Unit: 1638** **Tuesday, November 29, 2005** **Case Serial Number: 10/808979**	**From: Barb O'Bryen** **Location: Biotech-Chem Library** **Remsen 1a69** **Phone: 571-272-2518** **barbara.obryen@uspto.gov**

Search Notes

ORFE

Access DB# 171462

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: DAVID FOX Examiner # : 65901 Date: 11/14/05

Art Unit: 1638 Phone Number ~~30~~ 20795 Serial Number: 10/808,979

Mail Box and Bldg/Room Location: 2C09 2C18 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

RECEIVED
NOV 14 2005
TECH/CHEM. DIVISION
(STIC)

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: 05/2003

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please do
Interference Sequence
search
for SEQ ID NO: 18

BOB
Ina
03P

MN 6999

MG

11/29/05
Fill.

THANK YOU

[redacted]

November 2005

Published_Applications Nucleic Acid and Published_Applications Amino Acid database searches now generate two sets of results each. The Published_Applications databases have been split into two parts to reduce the amount of time required for their daily updates. This results in more machine time being available for processing searches.

Newly published applications will appear in the Published_Applications_New databases; older published applications make up the Published_Applications_Main databases.

Searches run against Nucleic Acid Published_Applications produce two sets of results, with the extensions **.rnpbm** (Published_Applications_NA_Main) and **.rnpbn** (Published_Applications_NA_New).
Searches run against Amino Acid Published_Applications produce two sets of results, with the extensions **.rapbm** (Published_Applications_AA_Main) and **.rapbn** (Published_Applications_AA_New).

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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: November 24, 2005, 20:26:32 ; Search time 1168 Seconds
(without alignments)
10651.673 Million cell updates/sec

Title: US-10-808-979-18
Perfect score: 6999
Sequence: 1 gcgatggcaatggaaaatgt.....gacgttttagacatgcaata 6999

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1303057 seqs, 888780828 residues

Total number of hits satisfying chosen parameters: 2606114

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	2624.6	37.5	6918	2	US-07-783-705A-13	Sequence 13, Appl
	2	2138.6	30.6	8814	3	US-10-808-807-18	Sequence 18, Appl
c	3	1035.4	14.8	8625	3	US-08-980-832-1	Sequence 1, Appli
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c	5	1035.4	14.8	11233	3	US-08-980-832-27	Sequence 27, Appl
c	6	1035.4	14.8	11233	3	US-09-920-923B-27	Sequence 27, Appl
	7	861.4	12.3	1479	3	US-10-808-807-7	Sequence 7, Appli
	8	826.2	11.8	1479	2	US-07-783-705A-10	Sequence 10, Appl
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	10	713.4	10.2	1518	2	US-08-096-043-7	Sequence 7, Appli
	11	713.4	10.2	1518	2	US-08-096-623A-7	Sequence 7, Appli
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	23	449.6	6.4	1083	2	US-08-331-004A-1	Sequence 1, Appli
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	45	308.2	4.4	1157	2	US-08-095-726-3	Sequence 3, Appli

ALIGNMENTS

RESULT 1
US-07-783-705A-13
; Sequence 13, Application US/07783705A
; Patent No. 5429939
; GENERAL INFORMATION:
; APPLICANT: Misawa, No. 5429939ihiko
; APPLICANT: Kobayashi, Kazuo
; APPLICANT: Nakamura, Katsumi
; APPLICANT: Yamano, Shigeyuki
; TITLE OF INVENTION: DNA SEQUENCES USEFUL FOR THE
; TITLE OF INVENTION: SYNTHESIS OF CAROTENOIDS
; NUMBER OF SEQUENCES: 18
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Ladas & Parry
; STREET: 26 West 61 Street
; CITY: New York
; STATE: NY
; COUNTRY: USA
; ZIP: 10023
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.50 inch, 720Kb storage
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: N/A
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/783,705A
; FILING DATE: 19911023
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 1-103078
; FILING DATE: 21-APR-1989
; APPLICATION NUMBER: JP 2-53225
; FILING DATE: 05-MAR-1990
; APPLICATION NUMBER: US 07/519,011
; FILING DATE: 19-APR-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Schwadron, Janet I.
; REGISTRATION NUMBER: 33,778
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 212-708-1935
; TELEFAX: 212-246-5959
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 6918 base pairs
; TYPE: NUCLEIC ACID
; STRANDEDNESS: double
; TOPOLOGY: linear

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;    ORIGINAL SOURCE:
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;      STRAIN:  20D3
;      CELL TYPE:  unicellular organism
;    FEATURE:
;      NAME/KEY:  CDS
;      NAME/KEY:  /gene="crt E"
;      LOCATION:  225 to 1133
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;      OTHER INFORMATION:  codes for geranylgeranyl
;      OTHER INFORMATION:  pyrophosphpate synthase
;      NAME/KEY:  CDS
;      NAME/KEY:  /gene="crt X"
;      LOCATION:  1143 to 2438
;      IDENTIFICATION METHOD:  by experiment
;      OTHER INFORMATION:  codes for zeaxanthin glycosilase
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;      NAME/KEY:  /gene="crt I"
;      LOCATION:  3582 to 5060
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;      NAME/KEY:  /gene="crt Z"
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;      LOCATION:  5925 to 6452
;      IDENTIFICATION METHOD:  by experiment
;      OTHER INFORMATION:  codes for @  @-carotene hydroxylase
;    PUBLICATION INFORMATION:
;      AUTHORS:  Misawa, No. 5429939ihiko
;      AUTHORS:  Nakagawa, Masaya
;      AUTHORS:  Kobayashi, Kazuo
;      AUTHORS:  Yamano, Shigeyuki
;      AUTHORS:  Izawa, Yuko
;      AUTHORS:  Nakamura, Katsumi
;      AUTHORS:  Harashima, Keiji
;      TITLE:  Elucidation of the Erwinia uredovora Carotenoid Biosynthesic Path
;      TITLE:  by Functional Analysis of Gene Products Expressed in Escheric
;      JOURNAL:  Journal of Bacteriology
;      VOLUME:  172
;      ISSUE:  12
;      PAGES:  6704-6712
;      DATE:  DEC-1990
US-07-783-705A-13

  Query Match             37.5%;  Score 2624.6;  DB 2;  Length 6918;
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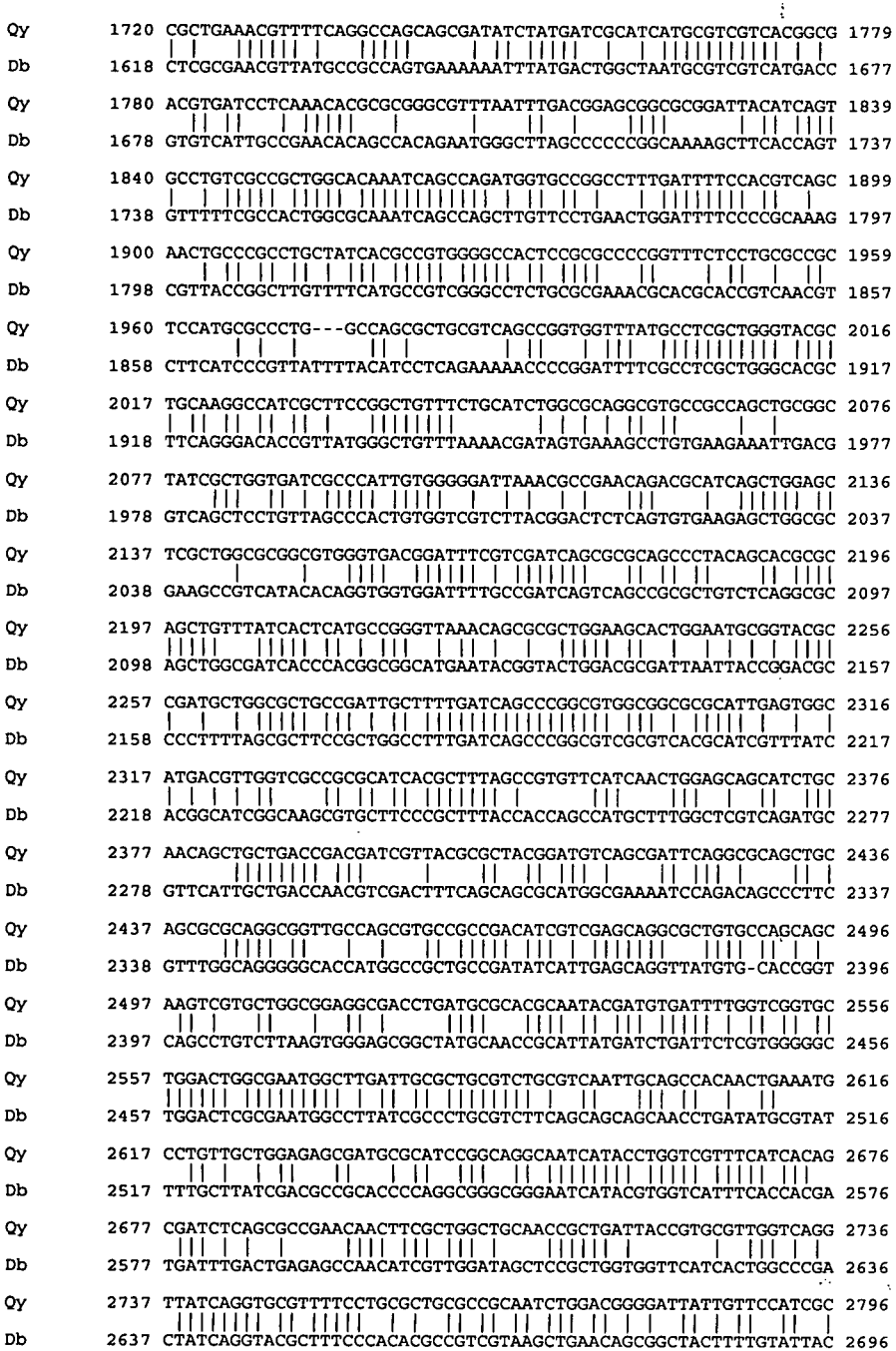
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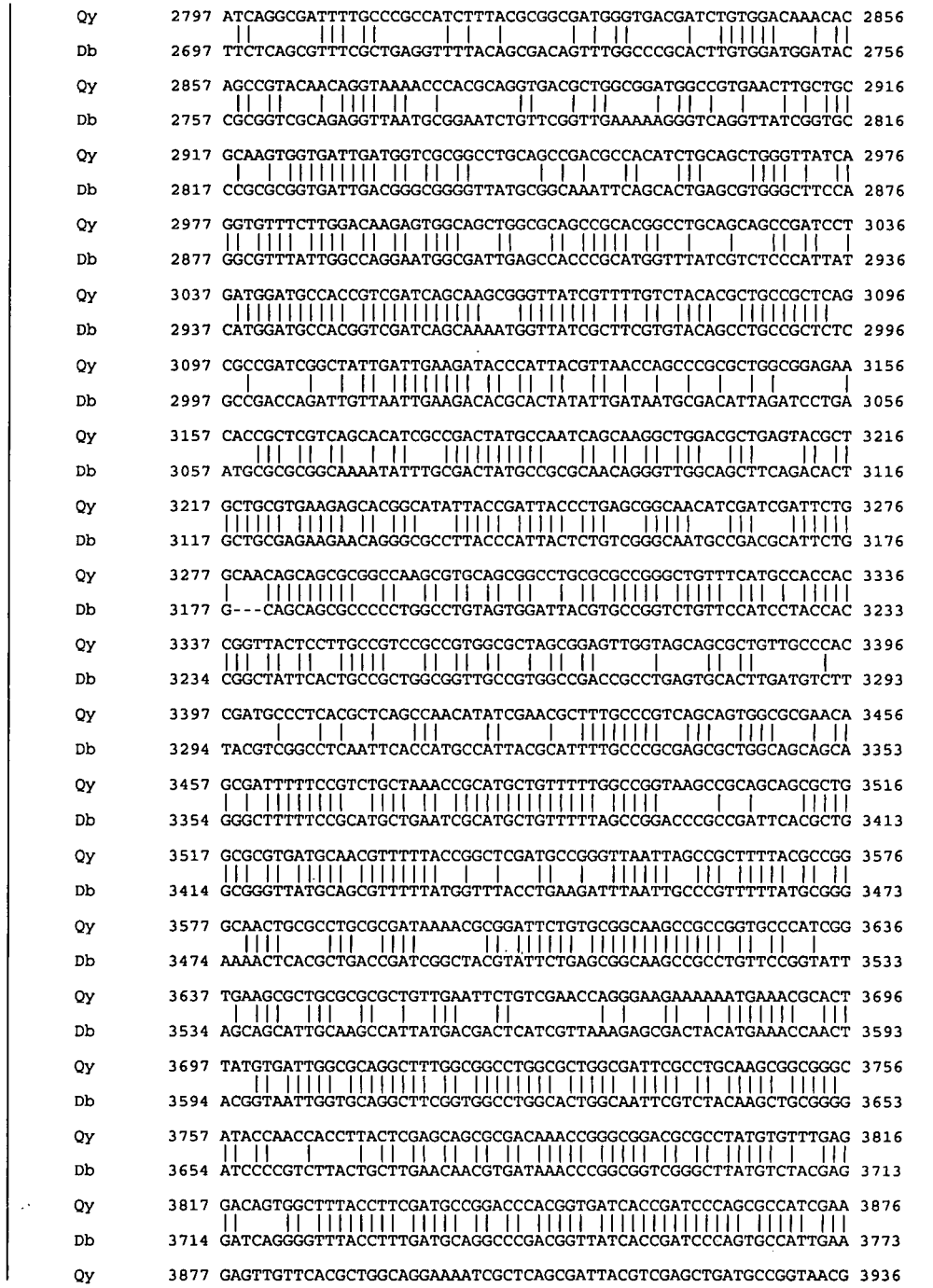
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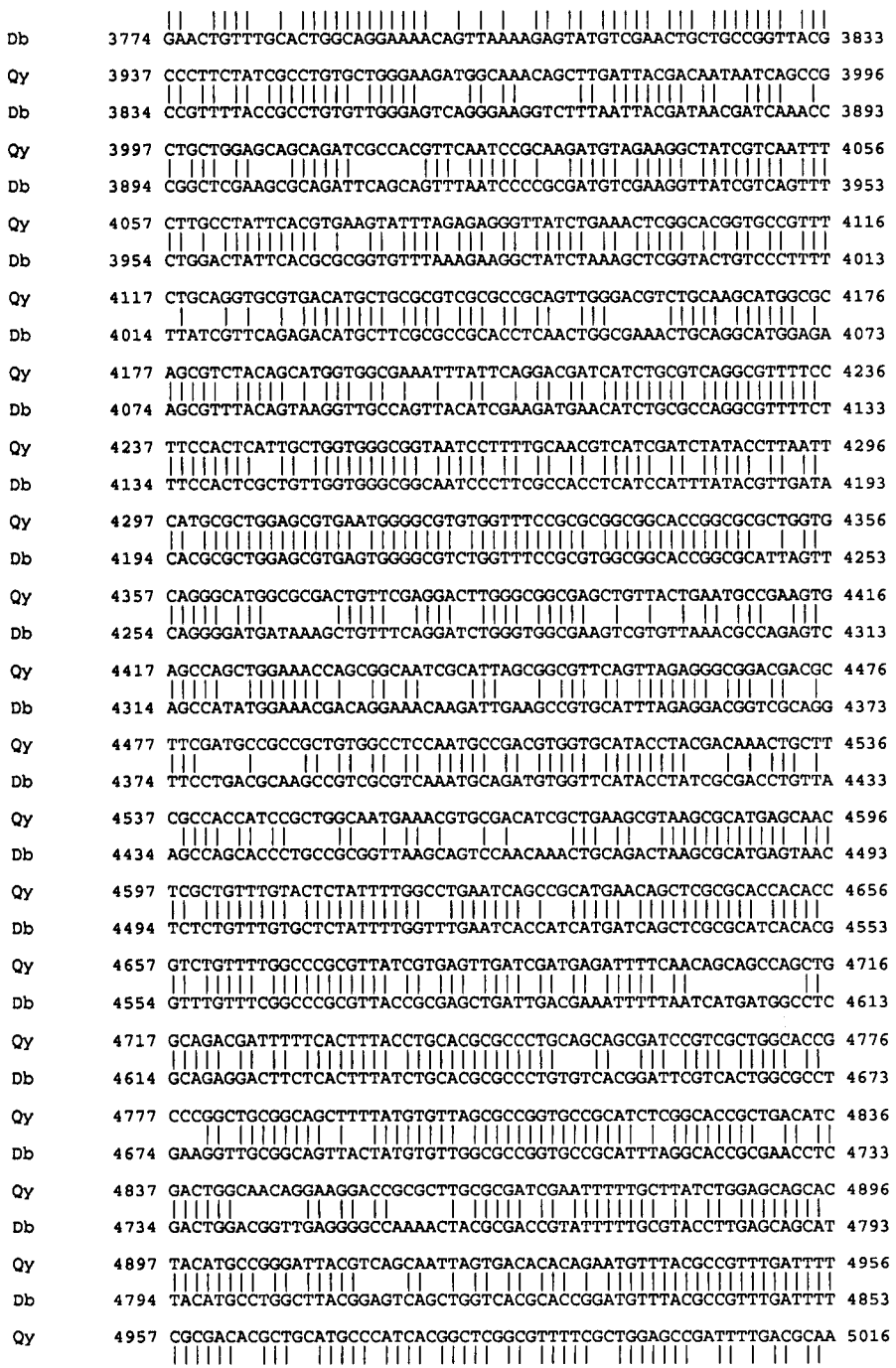
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; Sequence 18, Application US/10808807
; Patent No. 6929928
; GENERAL INFORMATION:
;  APPLICANT: E.I. du Pont deNemours and Co., Inc.
;  APPLICANT:  Cheng, Qiong
;  APPLICANT:  Tao, Luan
;  APPLICANT:  Sedkova, Natalia
;  TITLE OF INVENTION: GENES ENCODING CAROTENOID COMPOUNDS
;  FILE REFERENCE: CL2365 US NA
;  CURRENT APPLICATION NUMBER: US/10/808,807
;  CURRENT FILING DATE:  2004-03-24
;  PRIOR APPLICATION NUMBER: US 60/477,874
;  PRIOR FILING DATE: 2003-06-12
;  PRIOR APPLICATION NUMBER: US 60/527,083
;  PRIOR FILING DATE: 2003-12-03
;  NUMBER OF SEQ ID NOS: 20
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US-10-808-807-18

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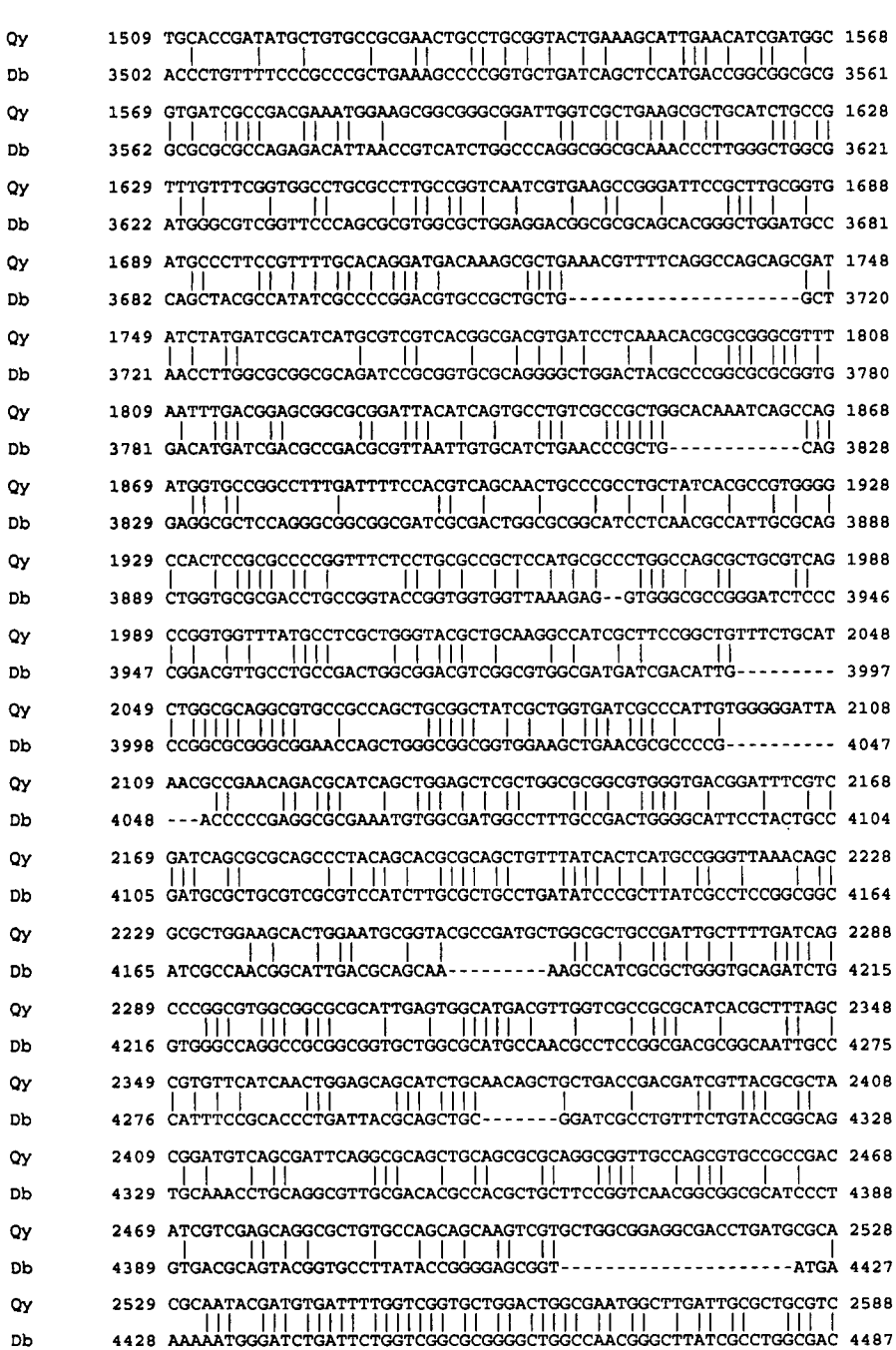
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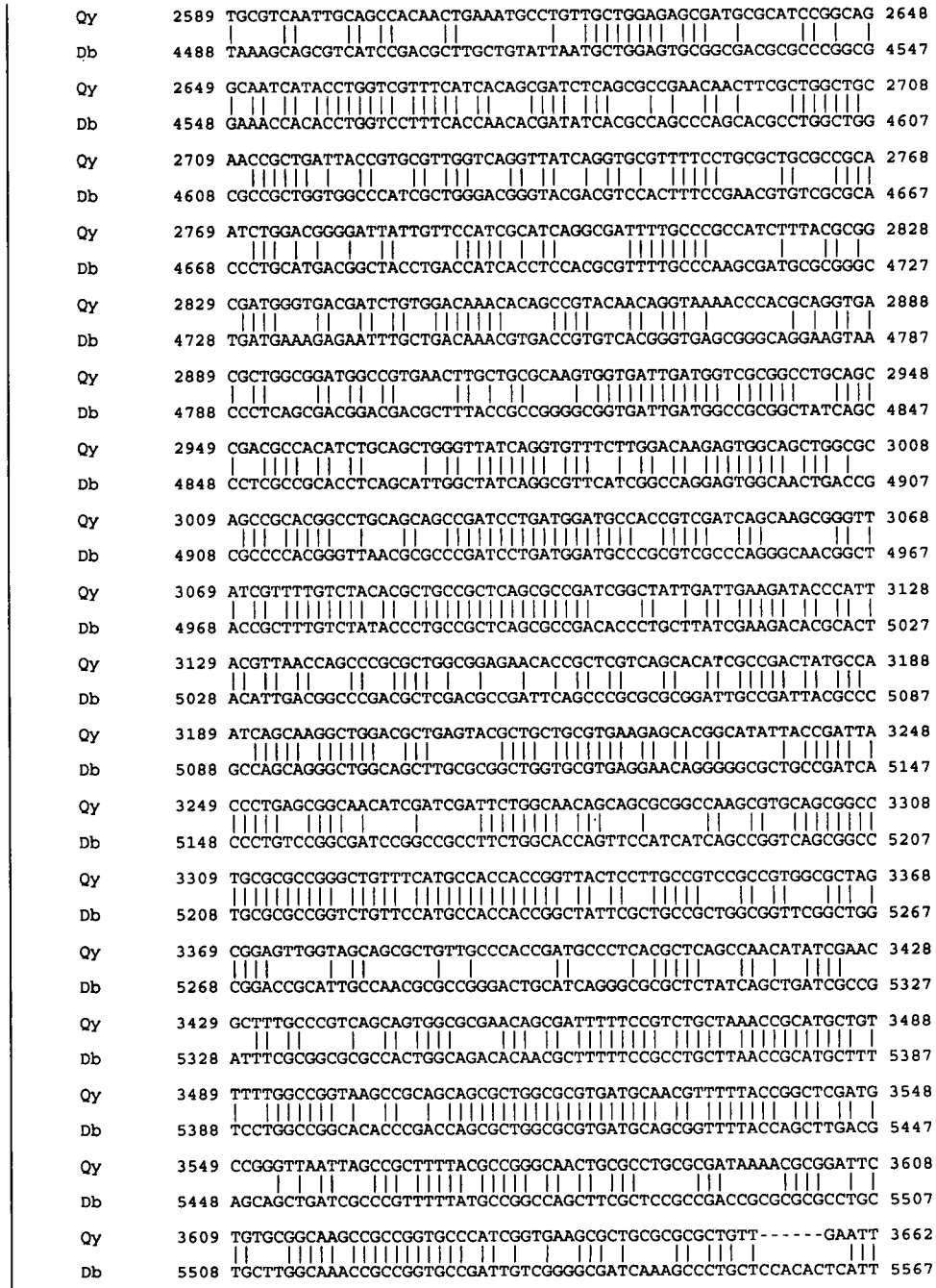
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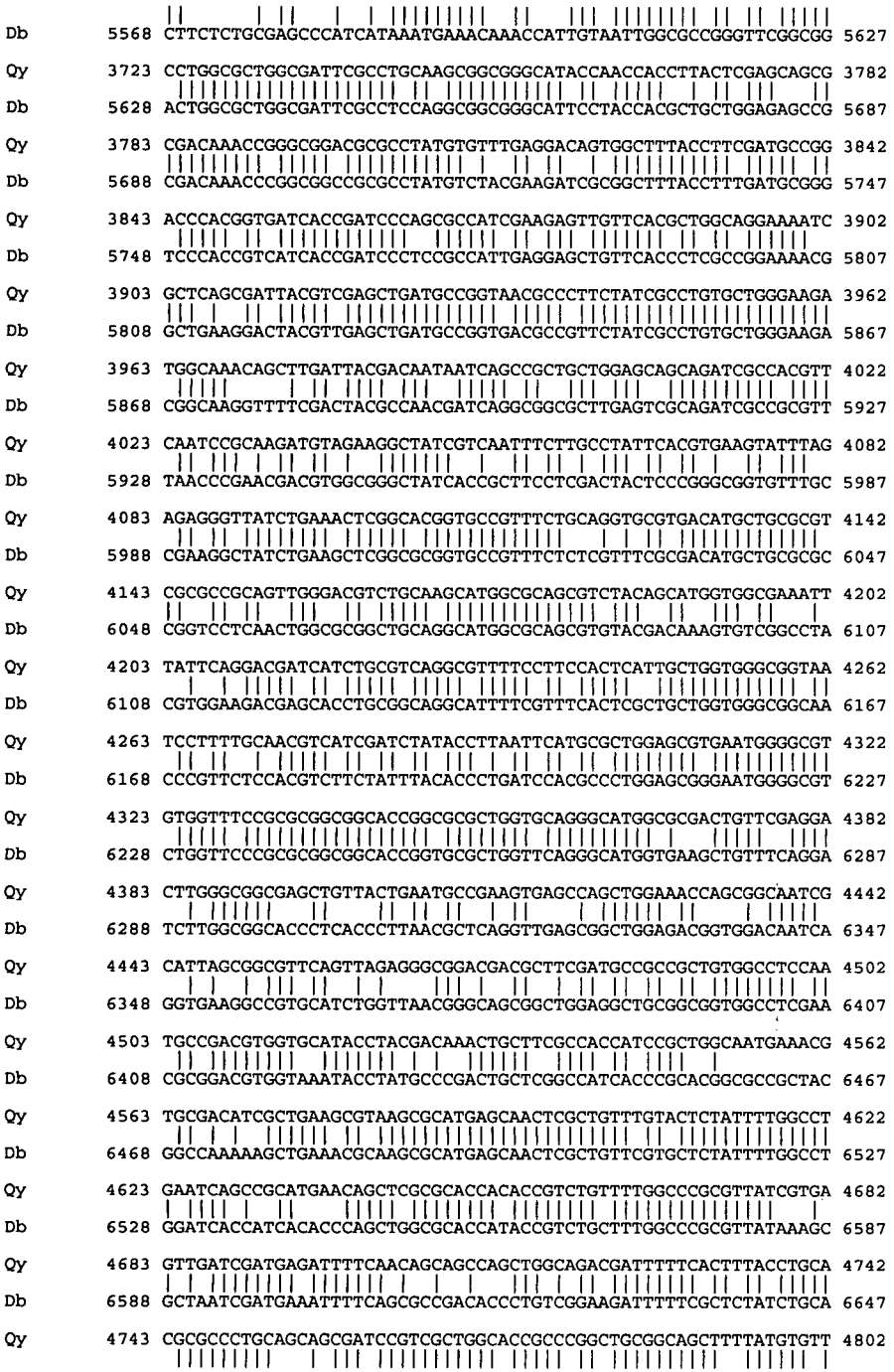
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RESULT 3
US-08-980-832-1/c
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; Patent No. 6291204
; GENERAL INFORMATION:
;  APPLICANT: Pasamontes, Luis
;  APPLICANT: Tsygankov, Yuri
;  TITLE OF INVENTION: Improved Fermentative Carotenoid Production
;  FILE REFERENCE: Improved Fermentive Carotenoid
;  CURRENT APPLICATION NUMBER: US/08/980,832B
;  CURRENT FILING DATE: 1997-12-01
;  NUMBER OF SEQ ID NOS: 66
;  SOFTWARE: PatentIn Ver. 2.1
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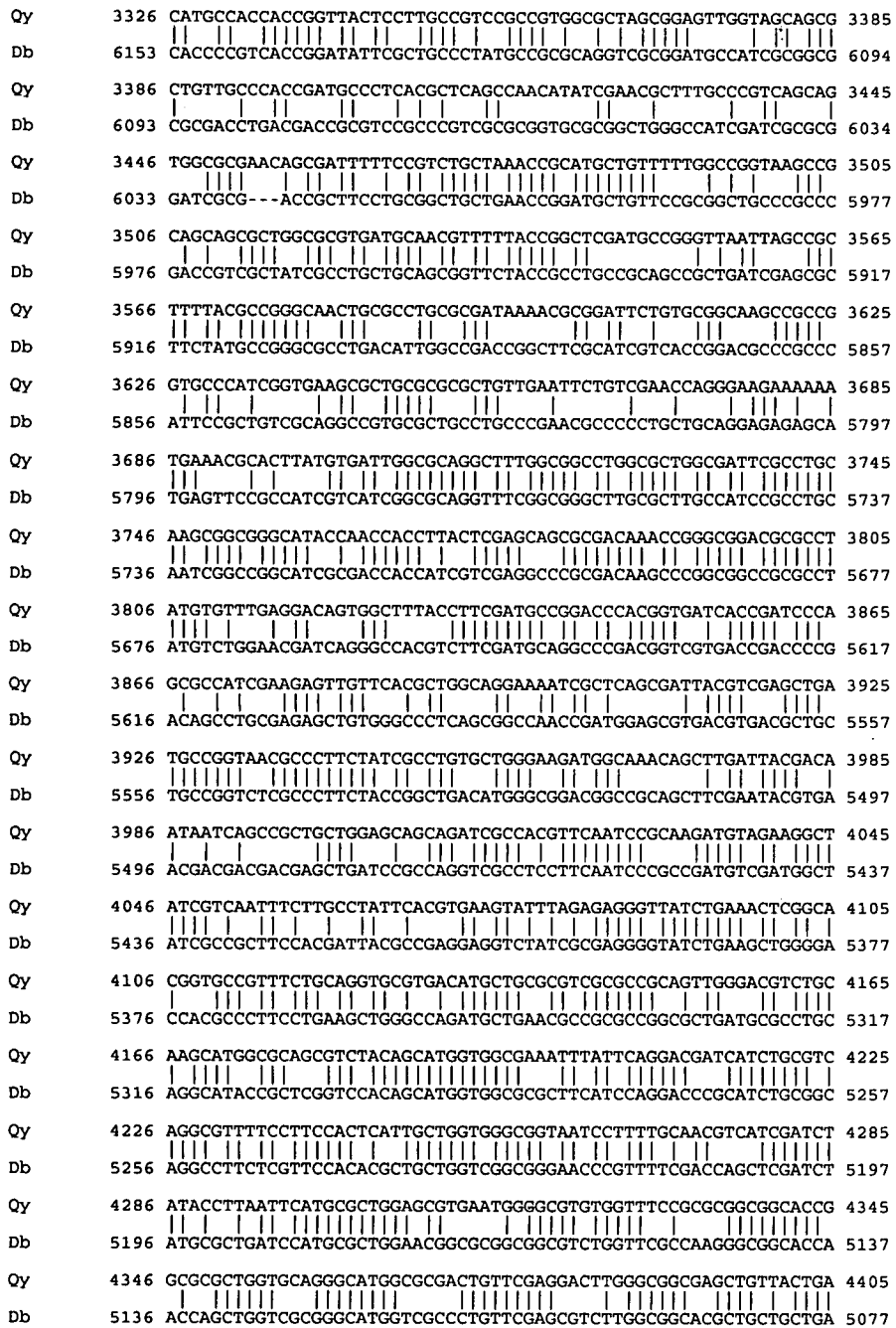
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; Sequence 1, Application US/09920923B
; Patent No. 6677134
; GENERAL INFORMATION:
;  APPLICANT: Pasamontes, Luis
;  APPLICANT:  Tsygankov, Yuri
;  TITLE OF INVENTION: Fermentative Carotenoid Production
;  FILE REFERENCE: 15464 US (C38435/125944)
;  CURRENT APPLICATION NUMBER: US/09/920,923B
;  CURRENT FILING DATE:  2001-08-02
;  PRIOR APPLICATION NUMBER: 08/980,832
;  PRIOR FILING DATE: 1997-12-01
;  NUMBER OF SEQ ID NOS: 66
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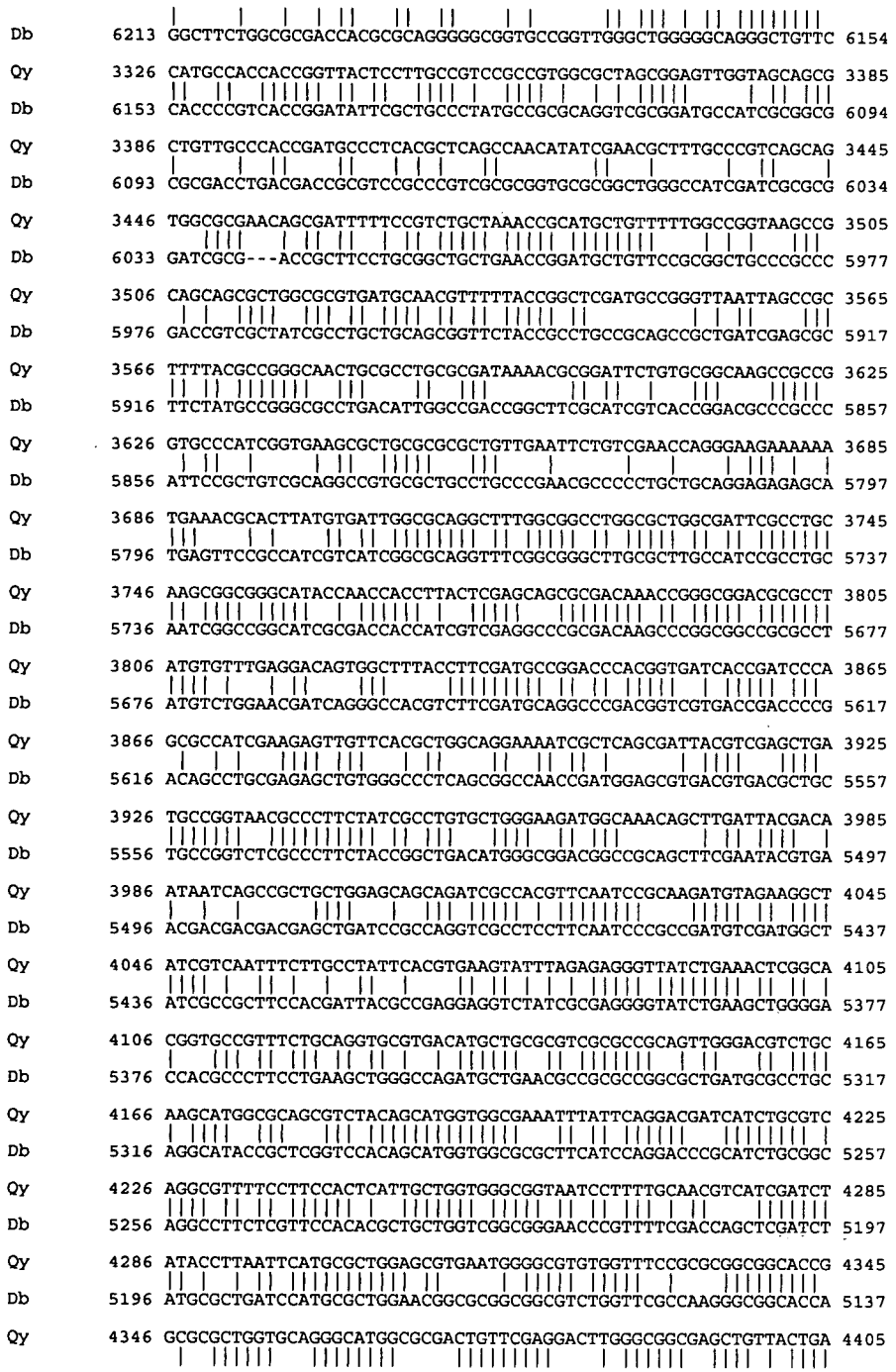
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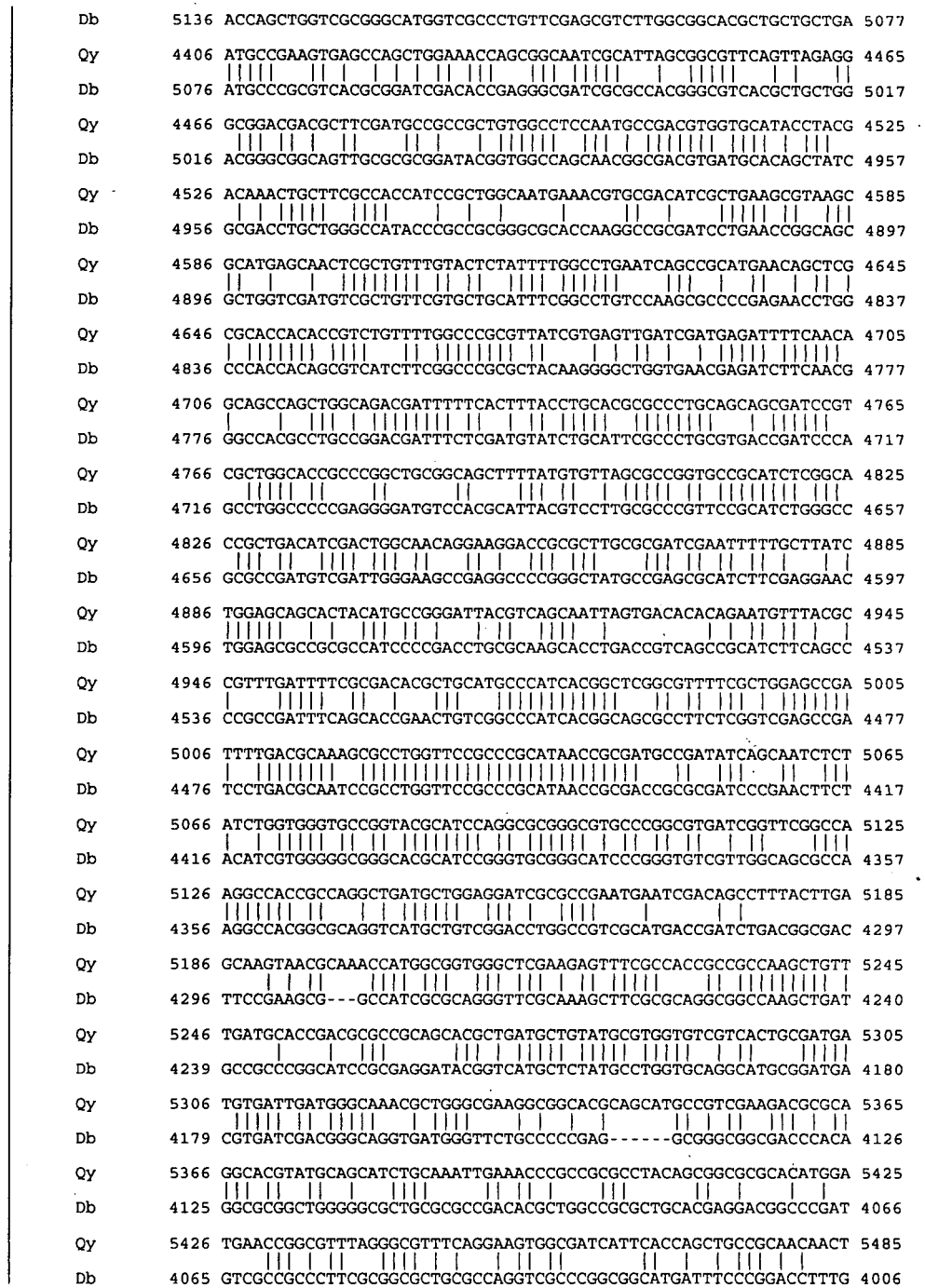
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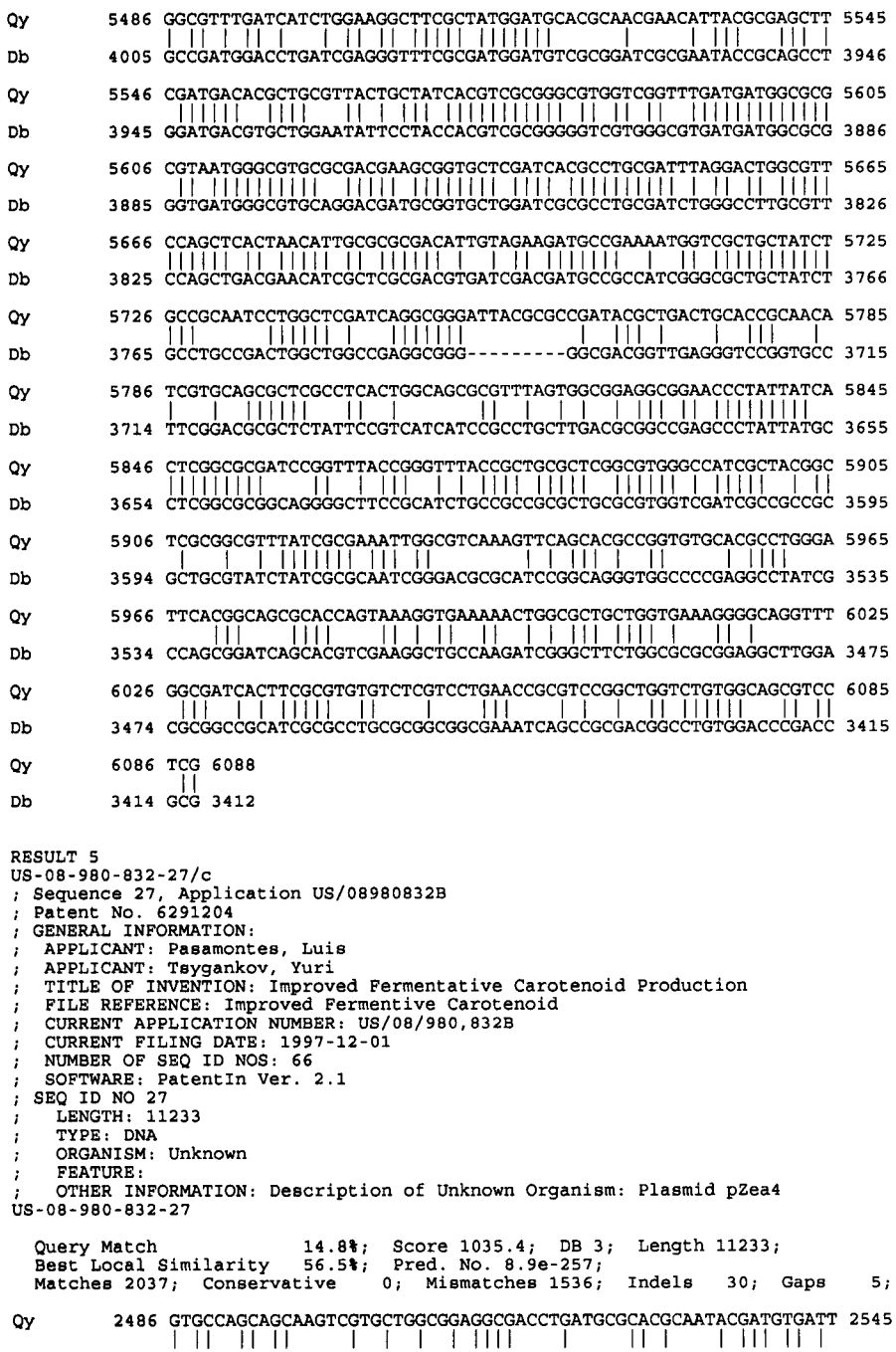

RESULT 5
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; Patent No. 6291204
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; APPLICANT: Pasamontes, Luis
; APPLICANT: Tsygankov, Yuri
; TITLE OF INVENTION: Improved Fermentative Carotenoid Production
; FILE REFERENCE: Improved Fermentive Carotenoid
; CURRENT APPLICATION NUMBER: US/08/980,832B
; CURRENT FILING DATE: 1997-12-01
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 27
; LENGTH: 11233
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Plasmid pZea4
US-08-980-832-27

Query Match 14.8%; Score 1035.4; DB 3; Length 11233;
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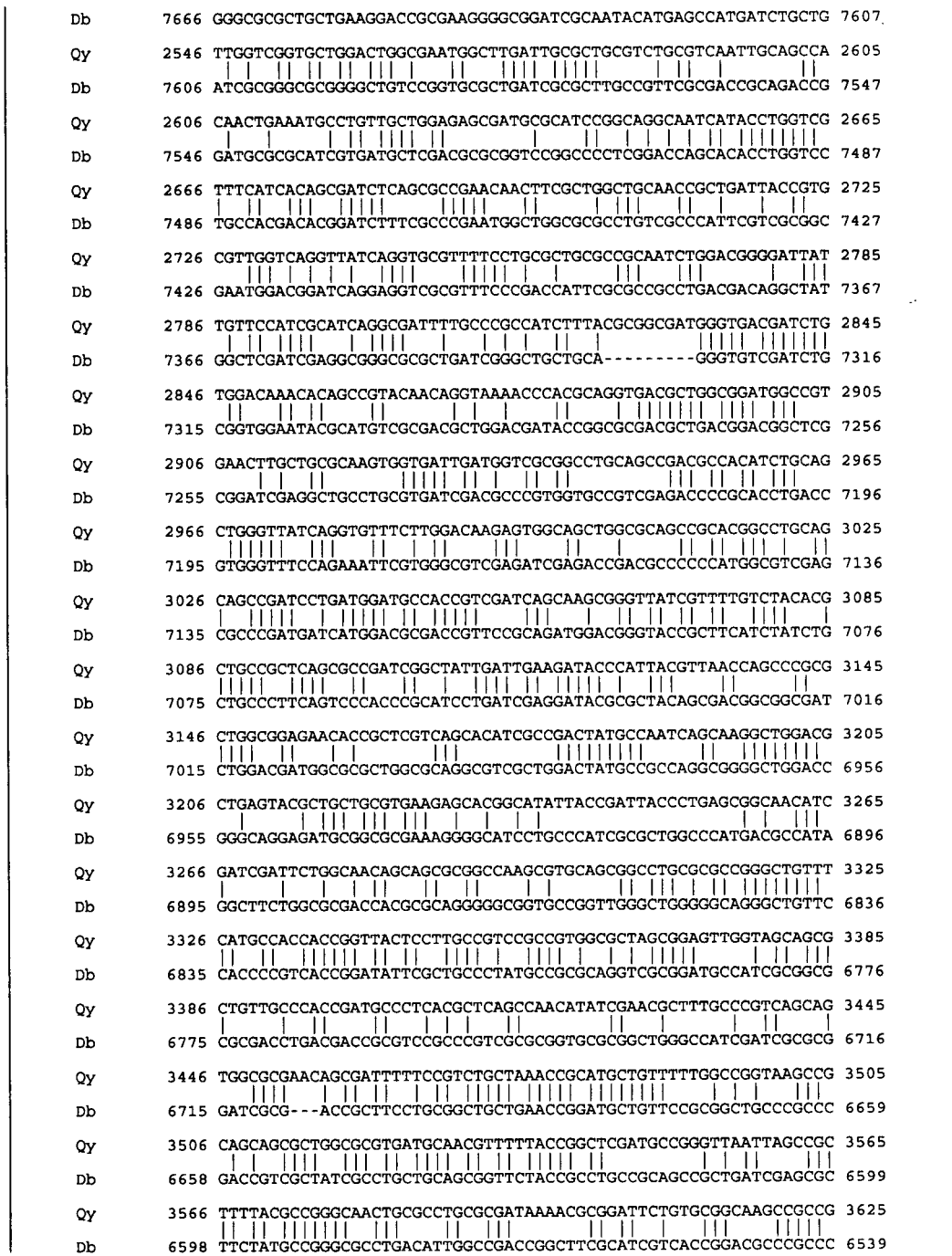

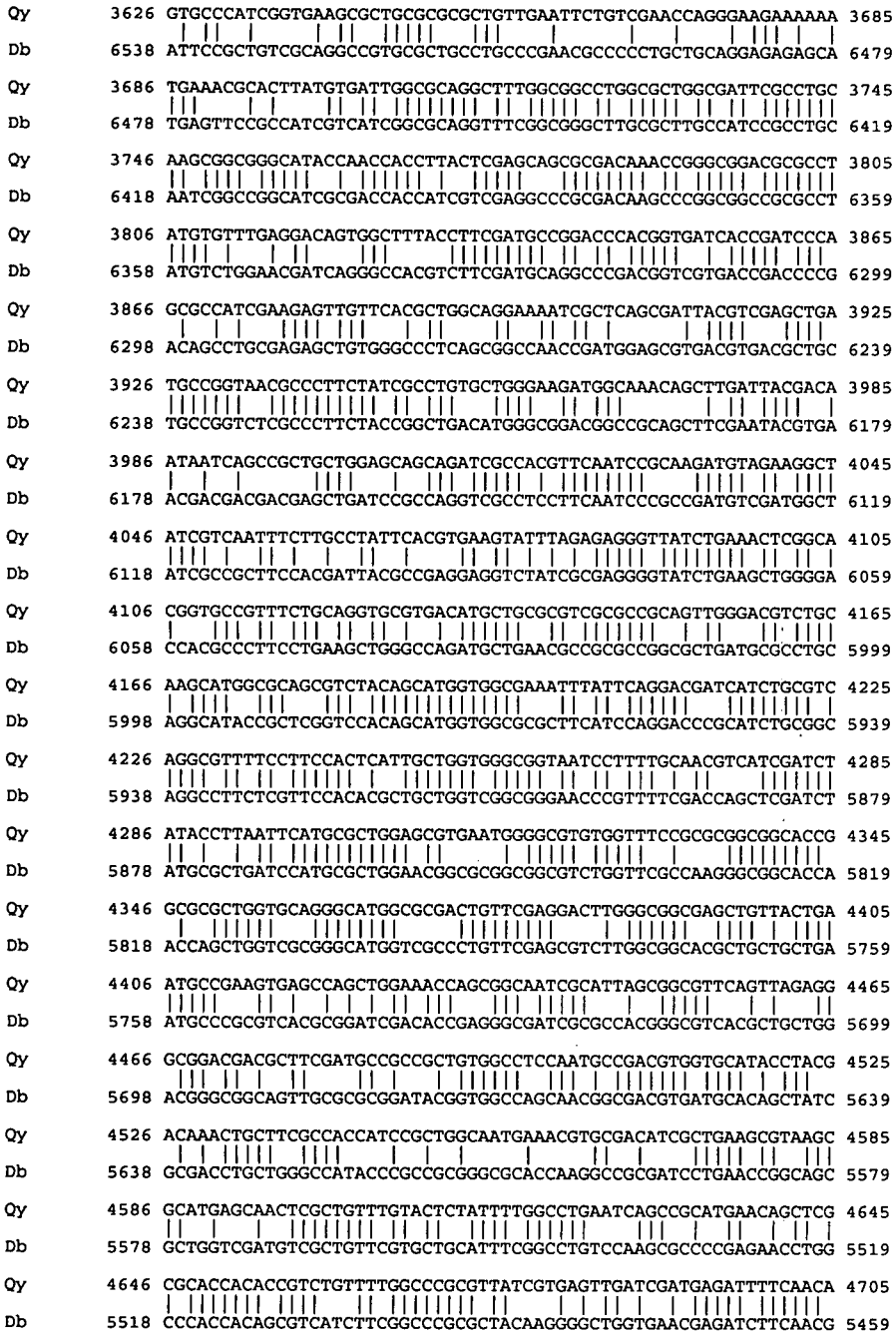
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Qy 4526 ACAAACTGCTTCGCCACCATCCGCTGGCAATGAAACGTGCGACATCGCTGAAGCGTAAGC 4585
Db 5638 GCGACCTGCTGGGCCATACCCGCCGCGGGCGCACCAAGGCCGCGATCCTGAACCGGCAGC 5579
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Db 5518 CCCACCACAGCGTCATCTTCGGCCCGCGCTACAAGGGGCTGGTGAACGAGATCTTCAACG 5459
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Qy       6086 TCG 6088

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RESULT 6
US-09-920-923B-27/c
; Sequence 27, Application US/09920923B
; Patent No. 6677134
; GENERAL INFORMATION:
; APPLICANT: Pasamontes, Luis
; APPLICANT: Tsygankov, Yuri
; TITLE OF INVENTION: Fermentative Carotenoid Production
; FILE REFERENCE: 15464 US (C38435/125944)
; CURRENT APPLICATION NUMBER: US/09/920,923B
; CURRENT FILING DATE: 2001-08-02
; PRIOR APPLICATION NUMBER: 08/980,832
; PRIOR FILING DATE: 1997-12-01
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 11233
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Plasmid pZea4
US-09-920-923B-27

Query Match 14.8%; Score 1035.4; DB 3; Length 11233;
Best Local Similarity 56.5%; Pred. No. 8.9e-257;
Matches 2037; Conservative 0; Mismatches 1536; Indels 30; Gaps 5;

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Db       7606 ATCGCGGGCGCGGGGCTGTCCGGTGCGCTGATCGCGCTTGCCGTTCGCGACCGCAGACCG 7547

Qy       2606 CAACTGAAATGCCTGTTGCTGGAGAGCGATGCGCATCCGGCAGGCAATCATACCTGGTCG 2665

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Qy       2786 TGTTCCATCGCATCAGGCGATTTTGCCCGCCATCTTTACGCGGCGATGGGTGACGATCTG 2845
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Db       6298 ACAGCCTGCGAGAGCTGTGGGCCCTCAGCGGCCAACCGATGGAGCGTGACGTGACGCTGC 6239
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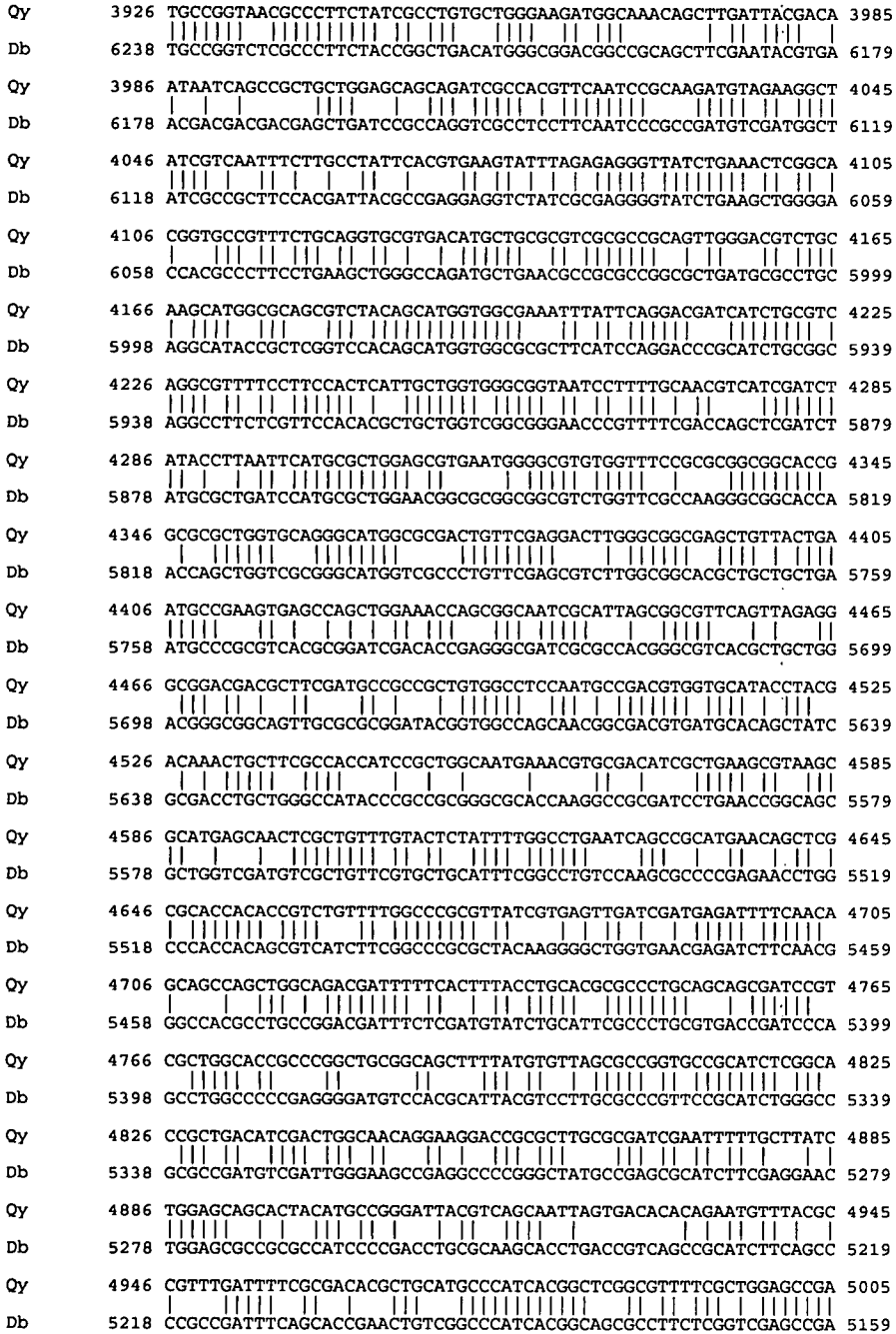
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Db       4096 GCG 4094


RESULT 7
US-10-808-807-7
; Sequence 7, Application US/10808807
; Patent No. 6929928
; GENERAL INFORMATION:
;  APPLICANT: E.I. du Pont deNemours and Co., Inc.
;  APPLICANT:  Cheng, Qiong
;  APPLICANT:  Tao, Luan
;  APPLICANT:  Sedkova, Natalia
;  TITLE OF INVENTION: GENES ENCODING CAROTENOID COMPOUNDS
;  FILE REFERENCE: CL2365 US NA
;  CURRENT APPLICATION NUMBER: US/10/808,807
;  CURRENT FILING DATE:  2004-03-24
;  PRIOR APPLICATION NUMBER: US 60/477,874
;  PRIOR FILING DATE: 2003-06-12
;  PRIOR APPLICATION NUMBER: US 60/527,083
;  PRIOR FILING DATE: 2003-12-03
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 7
;   LENGTH: 1479
;   TYPE: DNA
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US-10-808-807-7

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Qy       4165 CAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAATTTATTCAGGACGATCATCTGCGT 4224
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Db         541 CAGGCATTTTCGTTTCACTCGCTGCTGGTGGGCGGCAACCCGTTCTCCACGTCTTCTATT 600

Qy       4285 TATACCTTAATTCATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCGGCACC 4344
              || ||| | || || || |||||||| |||||||||| ||||| ||||||||||||||
Db         601 TACACCCTGATCCACGCCCTGGAGCGGGAATGGGGCGTCTGGTTCCCGCGCGGCGGCACC 660

Qy       4345 GGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGTTACTG 4404
              || |||||||| |||||||||| |   |||||  ||||  | ||||||   ||    ||
Db         661 GGTGCGCTGGTTCAGGGCATGGTGAAGCTGTTTCAGGATCTTGGCGGCACCCTCACCCTT 720

Qy       4405 AATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGTTAGAG 4464
              || ||  | ||     | |||||| ||     | |||||   | |  | ||| ||  | |
Db         721 AACGCTCAGGTTGAGCGGCTGGAGACGGTGGACAATCAGGTGAAGGCCGTGCATCTGGTT 780

Qy       4465 GGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATACCTAC 4524
              ||| |  ||  | || || || || |||||||| || || ||||||||  |||||||
Db         781 AACGGGCAGCGGCTGGAGGCTGCGGCGGTGGCCTCGAACGCGGACGTGGTAAATACCTAT 840

Qy       4525 GACAAACTGCTTCGCCACCATCCGCTGGCAATGAAACGTGCGACATCGCTGAAGCGTAAG 4584
              | |  ||||||  |||| || ||||  |          || | |  |||||| || |||
Db         841 GCCCGACTGCTCGGCCATCACCCGCACGGCGCCGCTACGGCCAAAAAGCTGAAACGCAAG 900

Qy       4585 CGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGCCTGAATCAGCCGCATGAACAGCTC 4644
              |||||||||||||||||||| || ||||||||||||||| |||| |  ||     |||||
Db         901 CGCATGAGCAACTCGCTGTTCGTGCTCTATTTTGGCCTGGATCACCATCACACCCAGCTG 960

Qy       4645 GCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGTGAGTTGATCGATGAGATTTTCAAC 4704
              |||||||| |||||||| |||||||||||||||   | | | |||||||  |||||| |
Db         961 GCGCACCATACCGTCTGCTTTGGCCCGCGTTATAAAGCGCTAATCGATGAAATTTTCAGC 1020

Qy       4705 AGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTGCACGCGCCCTGCAGCAGCGATCCG 4764
              |  |   ||| | || |||||||| || || ||||| |||||||||   | ||| |||
Db         1021 GCCGACACCCTGTCGGAAGATTTTTCGCTCTATCTGCATGCGCCCTGCGTAACCGACCCG 1080

Qy       4765 TCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTGTTAGCGCCGGTGCCGCATCTCGGC 4824
              ||||||| ||||| || |||||||||  |||||| | ||||||||||||||| |||||
Db         1081 TCGCTGGCCCCGCCGGGGTGCGGCAGCTACTATGTGCTCGCGCCGGTGCCGCACCTCGGT 1140

Qy       4825 ACCGCTGACATCGACTGGCAACAGGAAGGACCGCGCTTGCGCGATCGAATTTTTGCTTAT 4884
              | |||    |||||||     |||||| |||||  |||| |||||  |||||| ||||
Db         1141 AACGCCCCGCTCGACTGGAGCGTGGAAGGGCCGCGTCTGCGGGATCGCATTTTTGATTAT 1200

Qy       4885 CTGGAGCAGCACTACATGCCGGGATTACGTCAGCAATTAGTGACACACAGAATGTTTACG 4944
              || ||   || ||| |||||||| | ||    || | ||||| ||| | ||||| |||
Db         1201 CTCGAAGCGCGCTATATGCCGGGGCTGCGCTCCCAGCTGGTGACGCACCGCATGTTCACG 1260

Qy       4945 CCGTTTGATTTTCGCGACACGCTGCATGCCCATCACGGCTCGGCGTTTTCGCTGGAGCCG 5004
              |||   |||||||||| |||||  |||||   || || || |||||||| |||||||||
Db         1261 CCGGAAGATTTTCGCGATACGCTCGATGCCTGGCAGGGGTCAGCGTTTTCACTGGAGCCG 1320

Qy       5005 ATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAACCGCGATGCCGATATCAGCAATCTC 5064
              ||  | || || ||||||||||||||| ||||| ||||||||   ||    |  || |||
Db         1321 ATCCTCACCCAGAGCGCCTGGTTCCGGCCGCACAACCGCGACAGCGTGGTTGATAACCTC 1380

Qy       5065 TATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGCGTGCCCGGCGTGATCGGTTCGGCC 5124
              || ||||| || ||||| |||||||| ||||| |||||||| |||||||||| || |||
Db         1381 TACCTGGTCGGCGCCGGAACGCATCCCGGCGCTGGCGTGCCGGGCGTGATCGGATCCGCC 1440

Qy       5125 AAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCCGAA 5163
              ||||| || |||  | | |||  |  |||||   ||  ||
Db         1441 AAGGCAACGGCCCAGTTAATGTTAAAGGATTTAGCGTAA 1479


RESULT 8
US-07-783-705A-10
; Sequence 10, Application US/07783705A
; Patent No. 5429939
;  GENERAL INFORMATION:
;    APPLICANT:  Misawa, No. 5429939ihiko
;    APPLICANT:  Kobayashi, Kazuo
;    APPLICANT:  Nakamura, Katsumi
;    APPLICANT:  Yamano, Shigeyuki
;    TITLE OF INVENTION:  DNA SEQUENCES USEFUL FOR THE
;    TITLE OF INVENTION:  SYNTHESIS OF CAROTENOIDS
;    NUMBER OF SEQUENCES:  18
```

```
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Ladas & Parry
;      STREET:  26 West 61 Street
;      CITY:  New York
;      STATE:  NY
;      COUNTRY:  USA
;      ZIP:  10023
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.50 inch, 720Kb storage
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  N/A
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/783,705A
;      FILING DATE:  19911023
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  JP 1-103078
;      FILING DATE:  21-APR-1989
;      APPLICATION NUMBER:  JP 2-53225
;      FILING DATE:  05-MAR-1990
;      APPLICATION NUMBER:  US 07/519,011
;      FILING DATE:  19-APR-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Schwadron, Janet I.
;      REGISTRATION NUMBER:  33,778
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  212-708-1935
;      TELEFAX:  212-246-5959
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1479 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid (plasmid DNA)
US-07-783-705A-10

  Query Match             11.8%;  Score 826.2;  DB 2;  Length 1479;
  Best Local Similarity   72.6%;  Pred. No. 4e-203;
  Matches 1068;  Conservative    0;  Mismatches  403;  Indels    0;  Gaps    0;

Qy       3685 ATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGCGGCCTGGCGCTGGCGATTCGCCTG 3744
Db          1 ATGAAACCAACTACGGTAATTGGTGCAGGCTTCGGTGGCCTGGCACTGGCAATTCGTCTA 60

Qy       3745 CAAGCGGCGGGCATACCAACCACCTTACTCGAGCAGCGCGACAAACCGGGCGGACGCGCC 3804
Db            CAAGCTGCGGGGATCCCCGTCTTACTGCTTGAACAACGTGATAAACCCGGCGGTCGGGCT 120

Qy       3805 TATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCCGGACCCACGGTGATCACCGATCCC 3864
Db         121 TATGTCTACGAGGATCAGGGGTTTACCTTTGATGCAGGCCCGACGGTTATCACCGATCCC 180

Qy       3865 AGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAATCGCTCAGCGATTACGTCGAGCTG 3924
Db         181 AGTGCCATTGAAGAACTGTTTGCACTGGCAGGAAAACAGTTAAAAGAGTATGTCGAACTG 240

Qy       3925 ATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAAGATGGCAAACAGCTTGATTACGAC 3984
Db         241 CTGCCGGTTACGCCGTTTTACCGCCTGTGTTGGGAGTCAGGGAAGGTCTTTAATTACGAT 300

Qy       3985 AATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACGTTCAATCCGCAAGATGTAGAAGGC 4044
Db         301 AACGATCAAACCCGGCTCGAAGCGCAGATTCAGCAGTTTAATCCCCGCGATGTCGAAGGT 360

Qy       4045 TATCGTCAATTTCTTGCCTATTCACGTGAAGTATTTAGAGAGGGTTATCTGAAACTCGGC 4104
Db         361 TATCGTCAGTTTCTGGACTATTCACGCGCGGTGTTTAAAGAAGGCTATCTAAAGCTCGGT 420

Qy       4105 ACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGCGTCGCGCCGCAGTTGGGACGTCTG 4164
Db         421 ACTGTCCCTTTTTTATCGTTCAGAGACATGCTTCGCGCCGCACCTCAACTGGCGAAACTG 480

Qy       4165 CAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAATTTATTCAGGACGATCATCTGCGT 4224
Db         481 CAGGCATGGAGAAGCGTTTACAGTAAGGTTGCCAGTTACATCGAAGATGAACATCTGCGC 540

Qy       4225 CAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGTAATCCTTTTGCAACGTCATCGATC 4284
Db         541 CAGGCGTTTTCTTTCCACTCGCTGTTGGTGGGCGGCAATCCCTTCGCCACCTCATCCATT 600

Qy       4285 TATACCTTAATTCATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCGGCACC 4344
Db         601 TATACGTTGATACACGCGCTGGAGCGTGAGTGGGGCGTCTGGTTTCCGCGTGGCGGCACC 660

Qy       4345 GGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGTTACTG 4404
Db         661 GGCGCATTAGTTCAGGGGATGATAAAGCTGTTTCAGGATCTGGGTGGCGAAGTCGTGTTA 720

Qy       4405 AATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGTTAGAG 4464
Db         721 AACGCCAGAGTCAGCCATATGGAAACGACAGGAAACAAGATTGAAGCCGTGCATTTAGAG 780

Qy       4465 GGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATACCTAC 4524
Db         781 GACGGTCGCAGGTTCCTGACGCAAGCCGTCGCGTCAAATGCAGATGTGGTTCATACCTAT 840

Qy       4525 GACAAACTGCTTCGCCACCATCCGCTGGCAATGAAACGTGCGACATCGCTGAAGCGTAAG 4584
Db         841 CGCGACCTGTTAAGCCAGCACCCTGCCGCGGTTAAGCAGTCCAACAAACTGCAGACTAAG 900

Qy       4585 CGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGCCTGAATCAGCCGCATGAACAGCTC 4644
Db         901 CGCATGAGTAACTCTCTGTTTGTGCTCTATTTTGGTTTGAATCACCATCATGATCAGCTC 960

Qy       4645 GCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGTGAGTTGATCGATGAGATTTTCAAC 4704
Db         961 GCGCATCACACGGTTTGTTTCGGCCCGCGTTACCGCGAGCTGATTGACGAAATTTTTAAT 1020

Qy       4705 AGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTGCACGCGCCCTGCAGCAGCGATCCG 4764
Db        1021 CATGATGGCCTCGCAGAGGACTTCTCACTTTATCTGCACGCGCCCTGTGTCACGGATTCG 1080

Qy       4765 TCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTGTTAGCGCCGGTGCCGCATCTCGGC 4824
Db        1081 TCACTGGCGCCTGAAGGTTGCGGCAGTTACTATGTGTTGGCGCCGGTGCCGCATTTAGGC 1140

Qy       4825 ACCGCTGACATCGACTGGCAACAGGAAGGACCGCGCTTGCGCGATCGAATTTTTGCTTAT 4884
Db        1141 ACCGCGAACCTCGACTGGACGGTTGAGGGGCCAAAACTACGCGACCGTATTTTTGCGTAC 1200

Qy       4885 CTGGAGCAGCACTACATGCCGGGATTACGTCAGCAATTAGTGACACACAGAATGTTTACG 4944
Db        1201 CTTGAGCAGCATTACATGCCTGGCTTACGGAGTCAGCTGGTCACGCACCGGATGTTTACG 1260

Qy       4945 CCGTTTGATTTTCGCGACACGCTGCATGCCCATCACGGCTCGGCGTTTTCGCTGGAGCCG 5004
Db        1261 CCGTTTGATTTTCGCGACCAGCTTAATGCCTATCATGGCTCAGCCTTTTCTGTGGAGCCC 1320

Qy       5005 ATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAACCGCGATGCCGATATCAGCAATCTC 5064
Db        1321 GTTCTTACCCAGAGCGCCTGGTTTCGGCCGCATAACCGCGATAAAACCATTACTAATCTC 1380

Qy       5065 TATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGCGTGCCCGGCGTGATCGGTTCGGCC 5124
Db        1381 TACCTGGTCGGCGCAGGCACGCATCCCGGCGCAGGCATTCCTGGCGTCATCGGCTCGGCA 1440

Qy       5125 AAGGCCACCGCCAGGCTGATGCTGGAGGATC 5155
Db        1441 AAAGCGACAGCAGGTTTGATGCTGGAGGATC 1471


RESULT 9
US-08-095-726-7
; Sequence 7, Application US/08095726
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; Patent No. 5530188
;  GENERAL INFORMATION:
;    APPLICANT:  Ausich, Rodney L
;    APPLICANT:  Brinkhaus, Friedhelm L
;    APPLICANT:  Mukharji, Indrani
;    APPLICANT:  Proffitt, John H
;    APPLICANT:  Yarger, James G
;    APPLICANT:  Yen, Huei-Che B
;    TITLE OF INVENTION:  Beta-Carotene Biosynthesis in
;    TITLE OF INVENTION:  Genetically Engineered Hosts
;    NUMBER OF SEQUENCES:  79
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Amoco Corp., Patents and Licensing Dept
;      STREET:  200 E Randolph St
;      CITY:  Chicago
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60680-0703
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.24
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/095,726
;      FILING DATE:  21-JUL-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/785,566
;      FILING DATE:  30-OCT-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Galloway, No. 5530188val B
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  3128567180
;      TELEFAX:  3128564972
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1518 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-095-726-7

  Query Match             10.2%;  Score 713.4;  DB 2;  Length 1518;
  Best Local Similarity   67.7%;  Pred. No. 6e-174;
  Matches 1034;  Conservative    0;  Mismatches  481;  Indels   12;  Gaps    2;

Qy       3680 AAAAAATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGCGGCCTGGCGCTGGCGATTC 3739
Db          2 AAACCATGGAAAAAACCGTTGTGATTGGCGCAGGCTTTGGTGGCCTGGCGCTGGCGATTC 61

Qy       3740 GCCTGCAAGCGGCGGGCATACCAACCACCTTACTCGAGCAGCGCGACAAACCGGGCGGAC 3799
Db         62 GCCTGCAGGCGGCAGGGATCCCAACCGTACTGCTGGAGCAGCGGGACAAGCCCGGCGGTC 121

Qy       3800 GCGCCTATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCCGGACCCACGGTGATCACCG 3859
Db        122 GGGCCTACGTCTGGCATGACCAGGGCTTTACCTTTGACGCCGGGCCGACGGTGATCACCG 181

Qy       3860 ATCCCAGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAATCGCTCAGCGATTACGTCG 3919
Db        182 ATCCTACCGCGCTTGAGGCGCTGTTCACCCTGGCCGGCAGGCGCATGGAGGATTACGTCA 241

Qy       3920 AGCTGATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAAGATGGCAAACAGCTTGATT 3979
Db        242 GGCTGCTGCCGGTAAAACCCTTCTACCGACTCTGCTGGGAGTCCGGGAAGACCCTCGACT 301

Qy       3980 ACGACAATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACGTTCAATCCGCAAGATGTAG 4039
Db        302 ATGCTAACGACAGCTTCGAGCTTGAGGCGCAGATTACCCAGTTCAACCCCCGCGACGTCG 361

Qy       4040 AAGGCTATCGTCAATTTCTTGCCTATTCACGTGAAGTATTTAGAGAGGGTTATCTGAAAC 4099

Db        362 AGGGCTACCGGCGCTTTCTGGCTTACTCCCAGGCGGTATTCCAGGAGGGATATTTGCGCC 421

Qy       4100 TCGGCACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGCGTCGCGCCGCAGTTGGGAC 4159
Db        422 TCGGCAGCGTGCCGTTCCTCTCTTTTCGCGACATGCTGCGCGCCGGGCCGCAGCTGCTTA 481

Qy       4160 GTCTGCAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAATTTATTCAGGACGATCATC 4219
Db        482 AGCTCCAGGCGTGGCAGAGCGTCTACCAGTCGGTTTCGCGCTTTATTGAGGATGAGCATC 541

Qy       4220 TGCGTCAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGTAATCCTTTTGCAACGTCAT 4279
Db        542 TGCGGCAGGCCTTCTCGTTCCACTCCCTGCTGGTAGGCGGCAACCCCTTCACCACCTCGT 601

Qy       4280 CGATCTATACCTTAATTCATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCG 4339
Db        602 CCATCTACACCCTGATCCACGCCCTTGAGCGGGAGTGGGGGGTCTGGTTCCCTGAGGGCG 661

Qy       4340 GCACCGGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGT 4399
Db        662 GCACCGGGGCGCTGGTGAACGGCATGGTGAAGCTGTTTACCGATCTGGGCGGGGAGATCG 721

Qy       4400 TACTGAATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGT 4459
Db        722 AACTCAACGCCCGGGTCGAAGAGCTGGTGGTGGCCGATAACCGCGTAAGCCAGGTCCGGC 781

Qy       4460 TAGAGGGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATA 4519
Db        782 TCGCGGATGGTCGGATCTTTGACACCGACGCCGTAGCCTCGAACGCTGACGTGGTGAACA 841

Qy       4520 CCTACGACAAACTGCTTCGCCACCATCCGCTGGCAATGAAACGTGCGACATCGCTGAAGC 4579
Db        842 CCTATAAAAAGCTGCTCGGCACCATACCGGTGGGGCAGAAGCGGGCGGCACGGCTGGAGC 901

Qy       4580 GTAAGCGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGCCTGAATCAGCCGCATGAAC 4639
Db        902 GCAAGAGCATGAGCAACTCGCTGTTTGTGCTCTACTTCGGCCTGAACCAGCCTCATTCCC 961

Qy       4640 AGCTCGCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGTGAGTTGATCGATGAGATTT 4699
Db        962 AGCTGGCGCACCATACCATCTGTTTTGGTCCCCGCTACCGGGAGCTGATCGACGAGATCT 1021

Qy       4700 TCAACAGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTGCACGCGCCCTGCAGCAGCG 4759
Db       1022 TTACCGGCAGCGCGCTGGCGGATGACTTCTCGCTCTACCTGCACTCGCCCTGCGTGACCG 1081

Qy       4760 ATCCGTCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTGTTAGCGCCGGTGCCGCATC 4819
Db       1082 ATCCCTCGCTCGCGCCTCCCCCGTGCGCCAGCTTCTACGTGCTGGCCCCGGTGCCGCATC 1141

Qy       4820 TCGGCACCGCTGACATCGACTGGCAACAGGAAGGACCGCGCTTGCGCGATCGAATTTTTG 4879
Db       1142 TTGGCAACGCGCCGCTGGACTGGGCGCAGGAGGGGCCGAAGCTGCGCGACCGCATCTTTG 1201

Qy       4880 CTTATCTGGAGCAGCACTACATGCCGGGATTACGTCAGCAATTAGTGACACACAGAATGT 4939
Db       1202 ACTACCTTGAAGAGCGCTATATGCCCGGCCTGCGTAGCCAGCTGGTGACCCAGCGGATCT 1261

Qy       4940 TTACGCCGTTTGATTTTCGCGACACGCTGCATGCCCATCACGGCTCGGCGTTTTCGCTGG 4999
Db       1262 TTACCCGGCAGACTTCACGACACGCTTGGATCGCGATCTTGGGATCGCTTTTCATCGAGC 1321

Qy       5000 AGCCGATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAACCGCGATGCCGATATCAGCA 5059
Db       1322 CGCCTTCGTTGACCCAAGGCTTGTTCGCCGCAAACGCGACACGACATTC---------AA 1372

Qy       5060 ATCTCTATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGCGTGCCCGGCGTGATCGGTT 5119
Db       1373 ACCTCTACCTGGTGGCCGCAGGTACTCACCCTGGCGCGGGCATTCCTGGCGTAGTGGGCC 1432

Qy       5120 CGGCCAAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCCGAATGAATCGACAGCCTTT 5179
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Db       1433 TCGCCGAAAGCACCGCCAGCCTGATGATTGAGGATC---TGCAATGAGCCAACCGCCGCT 1489

Qy       5180 ACTTGAGCAAGTAACGCAAACCATGGC 5206
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Db       1490 GCTTGACCACGCCACGCAGACCATGGC 1516


RESULT 10
US-08-096-043-7
; Sequence 7, Application US/08096043
; Patent No. 5530189
;  GENERAL INFORMATION:
;    APPLICANT:  Ausich, Rodney L
;    APPLICANT:  Brinkhaus, Friedhelm L
;    APPLICANT:  Mukharji, Indrani
;    APPLICANT:  Proffitt, John H
;    APPLICANT:  Yarger, James G
;    APPLICANT:  Yen, Huei-Che B
;    TITLE OF INVENTION:  Lycopene Biosynthesis in
;    TITLE OF INVENTION:  Genetically Engineered Hosts
;    NUMBER OF SEQUENCES:  70
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Amoco Corp., Patents and Licensing Dept
;      STREET:  200 E Randolph St
;      CITY:  Chicago
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60680-0703
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.24
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/096,043
;      FILING DATE:  22-JUL-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/785,568
;      FILING DATE:  30-OCT-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Galloway, No. 5530189val B
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  3128567180
;      TELEFAX:  3128564972
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1518 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-096-043-7

  Query Match             10.2%;  Score 713.4;  DB 2;  Length 1518;
  Best Local Similarity   67.7%;  Pred. No. 6e-174;
  Matches 1034;  Conservative    0;  Mismatches  481;  Indels   12;  Gaps    2;

Qy       3680 AAAAAATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGCGGCCTGGCGCTGGCGATTC 3739
              |||  ||| ||   ||  |||||||||||||||||||| ||||||||||||||||||||
Db          2 AAACCATGGAAAAAACCGTTGTGATTGGCGCAGGCTTTGGTGGCCTGGCGCTGGCGATTC 61

Qy       3740 GCCTGCAAGCGGCGGGCATACCAACCACCTTACTCGAGCAGCGCGACAAACCGGGCGGAC 3799
              |||||||  ||||| || || ||||||    | || ||||||||  ||||| || ||||| |
Db         62 GCCTGCAGGCGGCAGGGATCCCAACCGTACTGCTGGAGCAGCGGGACAAGCCCGGCGGTC 121

Qy       3800 GCGCCTATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCCGGACCCACGGTGATCACCG 3859
              | ||||| || |   | |||   |||||||||||| || ||||| || ||||||||||||||
Db        122 GGGCCTACGTCTGGCATGACCAGGGCTTTACCTTTGACGCCGGGCCGACGGTGATCACCG 181

Qy       3860 ATCCCAGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAATCGCTCAGCGATTACGTCG 3919
              ||||  | |||  | || | | |||||||  ||||| || |      |    |||||||||
Db        182 ATCCTACCGCGCTTGAGGCGCTGTTCACCCTGGCCGGCAGGCGCATGGAGGATTACGTCA 241
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Qy       3920 AGCTGATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAAGATGGCAAACAGCTTGATT 3979
              ||||  |||||||||  |||||||| || || ||||||||     || ||     || || |
Db        242 GGCTGCTGCCGGTAAAACCCTTCTACCGACTCTGCTGGGAGTCCGGGAAGACCCTCGACT 301

Qy       3980 ACGACAATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACGTTCAATCCGCAAGATGTAG 4039
              | |  ||  |          ||| |||  ||||||  ||  ||||||  || |  || || |
Db        302 ATGCTAACGACAGCTTCGAGCTTGAGGCGCAGATTACCCAGTTCAACCCCCGCGACGTCG 361

Qy       4040 AAGGCTATCGTCAATTTCTTGCCTATTCACGTGAAGTATTTAGAGAGGGTTATCTGAAAC 4099
              | ||||| || |  ||||| || || || |  |  |||||     ||||| ||| ||  |
Db        362 AGGGCTACCGGCGCTTTCTGGCTTACTCCCAGGCGGTATTCCAGGAGGGATATTTGCGCC 421

Qy       4100 TCGGCACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGCGTCGCGCCGCAGTTGGGAC 4159
              ||||||  ||||||||  ||      | ||  ||||||||||||||  || |||||||  ||
Db        422 TCGGCAGCGTGCCGTTCCTCTCTTTTCGCGACATGCTGCGCGCCGGGCCGCAGCTGCTTA 481

Qy       4160 GTCTGCAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAATTTATTCAGGACGATCATC 4219
              || || || ||||  |||||||||     |||  ||   ||||||  |||| || ||||
Db        482 AGCTCCAGGCGTGGCAGAGCGTCTACCAGTCGGTTTCGCGCTTTATTGAGGATGAGCATC 541

Qy       4220 TGCGTCAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGTAATCCTTTTGCAACGTCAT 4279
              |||| ||||| || || |||||||  |||||||  |||||  || || ||  | || || |
Db        542 TGCGGCAGGCCTTCTCGTTCCACTCCCTGCTGGTAGGCGGCAACCCCTTCACCACCTCGT 601

Qy       4280 CGATCTATACCTTAATTCATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCG 4339
              | ||||| ||| | || || || || ||||| || ||||| || ||||| ||      ||||
Db        602 CCATCTACACCCTGATCCACGCCCTTGAGCGGGAGTGGGGGGTCTGGTTCCCTGAGGGCG 661

Qy       4340 GCACCGGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGT 4399
              ||||||| ||||||||| | ||||||| |   |||||     ||  ||||||| ||| |
Db        662 GCACCGGGGCGCTGGTGAACGGCATGGTGAAGCTGTTTACCGATCTGGGCGGGGGAGATCG 721

Qy       4400 TACTGAATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGT 4459
              ||| || |||   ||      ||||||          ||  || ||| | |||    || | |
Db        722 AACTCAACGCCCGGGTCGAAGAGCTGGTGGTGGCCGATAACCGCGTAAGCCAGGTCCGGC 781

Qy       4460 TAGAGGGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATA 4519
              | | ||  || ||   ||| ||  ||| ||| || ||||| || || ||||||||| | |
Db        782 TCGCGGATGGTCGGATCTTTGACACCGACGCCGTAGCCTCGAACGCTGACGTGGTGAACA 841

Qy       4520 CCTACGACAAACTGCTTCGCCACCATCCGCTGGCAATGAAACGTGCGACATCGCTGAAGC 4579
              ||||  | || |||||  ||  |   ||| |||    ||| || ||| ||  |||| |||
Db        842 CCTATAAAAAGCTGCTCGGCACCATACCGGTGGGGCAGAAGCGGGCGGCACGGCTGGAGC 901

Qy       4580 GTAAGCGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGCCTGAATCAGCCGCATGAAC 4639
              | ||| ||||||||||||||||||||||||||| ||||| || |||||||| |||| |||    |
Db        902 GCAAGAGCATGAGCAACTCGCTGTTTGTGCTCTACTTCGGCCTGAACCAGCCTCATTCCC 961

Qy       4640 AGCTCGCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGTGAGTTGATCGATGAGATTT 4699
              ||||  |||||||| ||| |||||||||| || || || || || ||||||||  |||||
Db        962 AGCTGGCGCACCATACCATCTGTTTTGGTCCCCGCTACCGGGAGCTGATCGACGAGATCT 1021

Qy       4700 TCAACAGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTGCACGCGCCCTGCAGCAGCG 4759
              | | | |||||  |||||| || || || || || |||||||| ||||||||    | ||
Db       1022 TTACCGGCAGCGCGCTGGCGGATGACTTCTCGCTCTACCTGCACTCGCCCTGCGTGACCG 1081

Qy       4760 ATCCGTCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTGTTAGCGCCGGTGCCGCATC 4819
              |||| ||||| || || |||  |||| |||||| || ||| | || ||||||||||||||
Db       1082 ATCCCTCGCTCGCGCCTCCCCCGTGCGCCAGCTTCTACGTGCTGGCCCCGGTGCCGCATC 1141

Qy       4820 TCGGCACCGCTGACATCGACTGGCAACAGGAAGGACCGCGCTTGCGCGATCGAATTTTTG 4879
              | |||| |||     | ||||||   ||||| || |||     |||||| || || ||||
Db       1142 TTGGCAACGCGCCGCTGGACTGGGCGCAGGAGGGGCCGAAGCTGCGCGACCGCATCTTTG 1201

Qy       4880 CTTATCTGGAGCAGCACTACATGCCGGGATTACGTCAGCAATTAGTGACACACAGAATGT 4939
              || || ||  ||| ||| ||||| ||  | |||   ||  | ||||| ||  | || |
Db       1202 ACTACCTTGAAGAGCGCTATATGCCCGGCCTGCGTAGCCAGCTGGTGACCCAGCGGATCT 1261

Qy       4940 TTACGCCGTTTGATTTTCGCGACACGCTGCATGCCCATCACGGCTCGGCGTTTTCGCTGG 4999
              ||||  |  |     ||  ||  ||  |  ||         || |||  ||       |
Db       1262 TTACCCGGCAGACTTCACGACACGCTTGGATCGCGATCTTGGGATCGCTTTTCATCGAGC 1321
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Qy       5000 AGCCGATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAACCGCGATGCCGATATCAGCA 5059
Db       1322 CGCCTTCGTTGACCCAAGGCTTGTTCGCCGCAAACGCGACACGACATTC---------AA 1372

Qy       5060 ATCTCTATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGCGTGCCCGGCGTGATCGGTT 5119
Db       1373 ACCTCTACCTGGTGGCCGCAGGTACTCACCCTGGCGCGGGCATTCCTGGCGTAGTGGGCC 1432

Qy       5120 CGGCCAAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCCGAATGAATCGACAGCCTTT 5179
Db       1433 TCGCCGAAAGCACCGCCAGCCTGATGATTGAGGATC---TGCAATGAGCCAACCGCCGCT 1489

Qy       5180 ACTTGAGCAAGTAACGCAAACCATGGC 5206
Db       1490 GCTTGACCACGCCACGCAGACCATGGC 1516


RESULT 11
US-08-096-623A-7
; Sequence 7, Application US/08096623A
; Patent No. 5684238
;  GENERAL INFORMATION:
;    APPLICANT:  Ausich, Rodney L.
;    APPLICANT:  Brinkhaus, Friedhelm L.
;    APPLICANT:  Mukharji, Indrani
;    APPLICANT:  Proffitt, John H.
;    APPLICANT:  Yarger, James G.
;    APPLICANT:  Yen, Huei-Che B.
;    TITLE OF INVENTION:  Biosynthesis of Zeaxanthin and
;    TITLE OF INVENTION:  Glycosylated Zeaxanthin in Genetically Engineered Hosts
;    NUMBER OF SEQUENCES:  104
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Welsh & Katz, Ltd.
;      STREET:  120 S. Riverside Plaza, 22nd Floor
;      CITY:  Chicago
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60606
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/096,623A
;      FILING DATE:  22-JUL-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/805,061
;      FILING DATE:  09-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/662,921
;      FILING DATE:  28-FEB-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/562,674
;      FILING DATE:  03-AUG-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/525,551
;      FILING DATE:  18-MAY-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/487,613
;      FILING DATE:  02-MAR-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Gamson, Edward P.
;      REGISTRATION NUMBER:  29,381
;      REFERENCE/DOCKET NUMBER:  AMO-006.1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (312) 655-1500
;      TELEFAX:  (312) 655-1501
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1518 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    POSITION IN GENOME:
;      MAP POSITION:  -6 to 1512
;      UNITS:  bp
US-08-096-623A-7

  Query Match             10.2%;  Score 713.4;  DB 2;  Length 1518;
  Best Local Similarity   67.7%;  Pred. No. 6e-174;
  Matches 1034;  Conservative    0;  Mismatches  481;  Indels   12;  Gaps    2;

Qy       3680 AAAAAATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGCGGCCTGGCGCTGGCGATTC 3739
Db          2 AAACCATGGAAAAAACCGTTGTGATTGGCGCAGGCTTTGGTGGCCTGGCGCTGGCGATTC 61

Qy       3740 GCCTGCAAGCGGCGGGCATACCAACCACCTTACTCGAGCAGCGCGACAAACCGGGCGGAC 3799
Db         62 GCCTGCAGGCGGCAGGGATCCCAACCGTACTGCTGGAGCAGCGGGACAAGCCCGGCGGTC 121

Qy       3800 GCGCCTATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCCGGACCCACGGTGATCACCG 3859
Db        122 GGGCCTACGTCTGGCATGACCAGGGCTTTACCTTTGACGCCGGGCCGACGGTGATCACCG 181

Qy       3860 ATCCCAGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAATCGCTCAGCGATTACGTCG 3919
Db        182 ATCCTACCGCGCTTGAGGCGCTGTTCACCCTGGCCGGCAGGCGCATGGAGGATTACGTCA 241

Qy       3920 AGCTGATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAAGATGGCAAACAGCTTGATT 3979
Db        242 GGCTGCTGCCGGTAAAACCCTTCTACCGACTCTGCTGGGAGTCCGGGAAGACCCTCGACT 301

Qy       3980 ACGACAATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACGTTCAATCCGCAAGATGTAG 4039
Db        302 ATGCTAACGACAGCTTCGAGCTTGAGGCGCAGATTACCCAGTTCAACCCCCGCGACGTCG 361

Qy       4040 AAGGCTATCGTCAATTTCTTGCCTATTCACGTGAAGTATTTAGAGAGGGTTATCTGAAAC 4099
Db        362 AGGGCTACCGGCGCTTTCTGGCTTACTCCCAGGCGGTATTCCAGGAGGGATATTTGCGCC 421

Qy       4100 TCGGCACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGCGTCGCGCCGCAGTTGGGAC 4159
Db        422 TCGGCAGCGTGCCGTTCCTCTCTTTTCGCGACATGCTGCGCGCCGGGCCGCAGCTGCTTA 481

Qy       4160 GTCTGCAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAATTTATTCAGGACGATCATC 4219
Db        482 AGCTCCAGGCGTGGCAGAGCGTCTACCAGTCGGTTTCGCGCTTTATTGAGGATGAGCATC 541

Qy       4220 TGCGTCAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGTAATCCTTTTGCAACGTCAT 4279
Db        542 TGCGGCAGGCCTTCTCGTTCCACTCCCTGCTGGTAGGCGGCAACCCCTTCACCACCTCGT 601

Qy       4280 CGATCTATACCTTAATTCATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCG 4339
Db        602 CCATCTACACCCTGATCCACGCCCTTGAGCGGGAGTGGGGGGTCTGGTTCCCTGAGGGCG 661

Qy       4340 GCACCGGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGT 4399
Db        662 GCACCGGGGCGCTGGTGAACGGCATGGTGAAGCTGTTTACCGATCTGGGCGGGGAGATCG 721

Qy       4400 TACTGAATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGT 4459
Db        722 AACTCAACGCCCGGGTCGAAGAGCTGGTGGTGGCCGATAACCGCGTAAGCCAGGTCCGGC 781

Qy       4460 TAGAGGGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATA 4519
Db        782 TCGCGGATGGTCGGATCTTTGACACCGACGCCGTAGCCTCGAACGCTGACGTGGTGAACA 841

Qy       4520 CCTACGACAAACTGCTTCGCCACCATCCGCTGGCAATGAAACGTGCGACATCGCTGAAGC 4579
Db        842 CCTATAAAAAGCTGCTCGGCACCATACCGGTGGGGCAGAAGCGGGCGGCACGGCTGGAGC 901

Qy       4580 GTAAGCGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGCCTGAATCAGCCGCATGAAC 4639
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Db        902 GCAAGAGCATGAGCAACTCGCTGTTTGTGCTCTACTTCGGCCTGAACCAGCCTCATTCCC 961

Qy       4640 AGCTCGCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGTGAGTTGATCGATGAGATTT 4699

Db        962 AGCTGGCGCACCATACCATCTGTTTTGGTCCCCGCTACCGGGAGCTGATCGACGAGATCT 1021

Qy       4700 TCAACAGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTGCACGCGCCCTGCAGCAGCG 4759

Db       1022 TTACCGGCAGCGCGCTGGCGGATGACTTCTCGCTCTACCTGCACTCGCCCTGCGTGACCG 1081

Qy       4760 ATCCGTCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTGTTAGCGCCGGTGCCGCATC 4819

Db       1082 ATCCCTCGCTCGCGCCTCCCCCGTGCGCCAGCTTCTACGTGCTGGCCCCGGTGCCGCATC 1141

Qy       4820 TCGGCACCGCTGACATCGACTGGCAACAGGAAGGACCGCGCTTGCGCGATCGAATTTTTG 4879

Db       1142 TTGGCAACGCGCCGCTGGACTGGGCGCAGGAGGGGCCGAAGCTGCGCGACCGCATCTTTG 1201

Qy       4880 CTTATCTGGAGCAGCACTACATGCCGGGATTACGTCAGCAATTAGTGACACACAGAATGT 4939

Db       1202 ACTACCTTGAAGAGCGCTATATGCCCGGCCTGCGTAGCCAGCTGGTGACCCAGCGGATCT 1261

Qy       4940 TTACGCCGTTTGATTTTCGCGACACGCTGCATGCCCATCACGGCTCGGCGTTTTCGCTGG 4999

Db       1262 TTACCCGGCAGACTTCACGACACGCTTGGATCGCGATCTTGGGATCGCTTTTCATCGAGC 1321

Qy       5000 AGCCGATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAACCGCGATGCCGATATCAGCA 5059

Db       1322 CGCCTTCGTTGACCCAAGGCTTGTTCGCCGCAAACGCGACACGACATTC---------AA 1372

Qy       5060 ATCTCTATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGCGTGCCCGGCGTGATCGGTT 5119

Db       1373 ACCTCTACCTGGTGGCCGCAGGTACTCACCCTGGCGCGGGCATTCCTGGCGTAGTGGGCC 1432

Qy       5120 CGGCCAAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCCGAATGAATCGACAGCCTTT 5179

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Qy       5180 ACTTGAGCAAGTAACGCAAACCATGGC 5206

Db       1490 GCTTGACCACGCCACGCAGACCATGGC 1516


RESULT 12
US-08-095-726-9
; Sequence 9, Application US/08095726
; Patent No. 5530188
;  GENERAL INFORMATION:
;    APPLICANT:  Ausich, Rodney L
;    APPLICANT:  Brinkhaus, Friedhelm L
;    APPLICANT:  Mukharji, Indrani
;    APPLICANT:  Proffitt, John H
;    APPLICANT:  Yarger, James G
;    APPLICANT:  Yen, Huei-Che B
;    TITLE OF INVENTION:  Beta-Carotene Biosynthesis in
;    TITLE OF INVENTION:  Genetically Engineered Hosts
;    NUMBER OF SEQUENCES:  79
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Amoco Corp., Patents and Licensing Dept
;      STREET:  200 E Randolph St
;      CITY:  Chicago
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60680-0703
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.24
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/095,726
;      FILING DATE:  21-JUL-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/785,566
;      FILING DATE:  30-OCT-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Galloway, No. 5530188val B
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  3128567180
;      TELEFAX:  3128564972
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1522 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-095-726-9

  Query Match             10.1%;  Score 708.4;  DB 2;  Length 1522;
  Best Local Similarity   67.6%;  Pred. No. 1.2e-172;
  Matches 1029;  Conservative    0;  Mismatches  481;  Indels   12;  Gaps    2;

Qy       3685 ATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGCGGCCTGGCGCTGGCGATTCGCCTG 3744

Db         11 ATGGAAAAAACCGTTGTGATTGGCGCAGGCTTTGGTGGCCTGGCGCTGGCGATTCGCCTG 70

Qy       3745 CAAGCGGCGGGCATACCAACCACCTTACTCGAGCAGCGCGACAAACCGGGCGGACGCGCC 3804

Db         71 CAGGCGGCAGGGATCCCAACCGTACTGCTGGAGCAGCGGGACAAGCCCGGCGGTCGGGCC 130

Qy       3805 TATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCCGGACCCACGGTGATCACCGATCCC 3864

Db        131 TACGTCTGGCATGACCAGGGCTTTACCTTTGACGCCGGGCCGACGGTGATCACCGATCCT 190

Qy       3865 AGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAATCGCTCAGCGATTACGTCGAGCTG 3924

Db        191 ACCGCGCTTGAGGCGCTGTTCACCCTGGCCGGCAGGCGCATGGAGGATTACGTCAGGCTG 250

Qy       3925 ATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAAGATGGCAAACAGCTTGATTACGAC 3984

Db        251 CTGCCGGTAAAACCCTTCTACCGACTCTGCTGGGAGTCCGGGAAGACCCTCGACTATGCT 310

Qy       3985 AATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACGTTCAATCCGCAAGATGTAGAAGGC 4044

Db        311 AACGACAGCTTCGAGCTTGAGGCGCAGATTACCCAGTTCAACCCCCGCGACGTCGAGGGC 370

Qy       4045 TATCGTCAATTTCTTGCCTATTCACGTGAAGTATTTAGAGAGGGTTATCTGAAACTCGGC 4104

Db        371 TACCGGCGCTTTCTGGCTTACTCCCAGGCGGTATTCCAGGAGGGATATTTGCGCCTCGGC 430

Qy       4105 ACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGCGTCGCGCCGCAGTTGGGACGTCTG 4164

Db        431 AGCGTGCCGTTCCTCTCTTTTCGCGACATGCTGCGCGCCGGGCCGCAGCTGCTTAAGCTC 490

Qy       4165 CAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAATTTATTCAGGACGATCATCTGCGT 4224

Db        491 CAGGCGTGGCAGAGCGTCTACCAGTCGGTTTCGCGCTTTATTGAGGATGAGCATCTGCGG 550

Qy       4225 CAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGTAATCCTTTTGCAACGTCATCGATC 4284

Db        551 CAGGCCTTCTCGTTCCACTCCCTGCTGGTAGGCGGCAACCCCTTCACCACCTCGTCCATC 610

Qy       4285 TATACCTTAATTCATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCGGCACC 4344

Db        611 TACACCCTGATCCACGCCCTTGAGCGGGAGTGGGGGGTCTGGTTCCCTGAGGGCGGCACC 670

Qy       4345 GGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGTTACTG 4404

Db        671 GGGGCGCTGGTGAACGGCATGGTGAAGCTGTTTACCGATCTGGGCGGGGAGATCGAACTC 730

Qy       4405 AATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGTTAGAG 4464

Db        731 AACGCCCGGGTCGAAGAGCTGGTGGTGGCCGATAACCGCGTAAGCCAGGTCCGGCTCGCG 790
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Qy       4465 GGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATACCTAC 4524
Db        791 GATGGTCGGATCTTTGACACCGACGCCGTAGCCTCGAACGCTGACGTGGTGAACACCTAT 850

Qy       4525 GACAAACTGCTTCGCCACCATCCGCTGGCAATGAAACGTGCGACATCGCTGAAGCGTAAG 4584
Db        851 AAAAAGCTGCTCGGCACCATACCGGTGGGGCAGAAGCGGGCGGCACGGCTGGAGCGCAAG 910

Qy       4585 CGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGCCTGAATCAGCCGCATGAACAGCTC 4644
Db        911 AGCATGAGCAACTCGCTGTTTGTGCTCTACTTCGGCCTGAACCAGCCTCATTCCCAGCTG 970

Qy       4645 GCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGTGAGTTGATCGATGAGATTTTCAAC 4704
Db        971 GCGCACCATACCATCTGTTTTGGTCCCCGCTACCGGGAGCTGATCGACGAGATCTTTACC 1030

Qy       4705 AGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTGCACGCGCCCTGCAGCAGCGATCCG 4764
Db       1031 GGCAGCGCGCTGGCGGATGACTTCTCGCTCTACCTGCACTCGCCCTGCGTGACCGATCCC 1090

Qy       4765 TCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTGTTAGCGCCGGTGCCGCATCTCGGC 4824
Db       1091 TCGCTCGCGCCTCCCCCGTGCGCCAGCTTCTACGTGCTGGCCCCGGTGCCGCATCTTGGC 1150

Qy       4825 ACCGCTGACATCGACTGGCAACAGGAAGGACCGCGCTTGCGCGATCGAATTTTTGCTTAT 4884
Db       1151 AACGCGCCGCTGGACTGGGCGCAGGAGGGGCCGAAGCTGCGCGACCGCATCTTTGACTAC 1210

Qy       4885 CTGGAGCAGCACTACATGCCGGGATTACGTCAGCAATTAGTGACACACAGAATGTTTACG 4944
Db       1211 CTTGAAGAGCGCTATATGCCCGGCCTGCGTAGCCAGCTGGTGACCCAGCGGATCTTTACC 1270

Qy       4945 CCGTTTGATTTTCGCGACACGCTGCATGCCCATCACGGCTCGGCGTTTTCGCTGGAGCCG 5004
Db       1271 CGGCAGACTTCACGACACGCTTGGATCGCGATCTTGGGATCGCTTTTCATCGAGCCGCCT 1330

Qy       5005 ATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAACCGCGATGCCGATATCAGCAATCTC 5064
Db       1331 TCGTTGACCCAAGGCTTGTTCGCCGCAAACGCGACACGACATTC---------AAACCTC 1381

Qy       5065 TATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGCGTGCCCGGCGTGATCGGTTCGGCC 5124
Db       1382 TACCTGGTGGCCGCAGGTACTCACCCTGGCGCGGGCATTCCTGGCGTAGTGGGCCTCGCC 1441

Qy       5125 AAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCCGAATGAATCGACAGCCTTTACTTG 5184
Db       1442 GAAAGCACCGCCAGCCTGATGATTGAGGATC---TGCAATGAGCCAACCGCCGCTGCTTG 1498

Qy       5185 AGCAAGTAACGCAAACCATGGC 5206
Db       1499 ACCACGCCACGTCGACCATGGC 1520
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RESULT 13
US-08-096-043-9
; Sequence 9, Application US/08096043
; Patent No. 5530189
;  GENERAL INFORMATION:
;    APPLICANT:  Ausich, Rodney L
;    APPLICANT:  Brinkhaus, Friedhelm L
;    APPLICANT:  Mukharji, Indrani
;    APPLICANT:  Proffitt, John H
;    APPLICANT:  Yarger, James G
;    APPLICANT:  Yen, Huei-Che B
;    TITLE OF INVENTION:  Lycopene Biosynthesis in
;    TITLE OF INVENTION:  Genetically Engineered Hosts
;    NUMBER OF SEQUENCES:  70
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Amoco Corp., Patents and Licensing Dept
;      STREET:  200 E Randolph St
;      CITY:  Chicago
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60680-0703
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.24
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/096,043
;      FILING DATE:  22-JUL-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/785,568
;      FILING DATE:  30-OCT-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Galloway, No. 5530189val B
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  3128567180
;      TELEFAX:  3128564972
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1522 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-096-043-9

  Query Match             10.1%;  Score 708.4;  DB 2;  Length 1522;
  Best Local Similarity   67.6%;  Pred. No. 1.2e-172;
  Matches 1029;  Conservative    0;  Mismatches  481;  Indels   12;  Gaps    2;

Qy       3685 ATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGCGGCCTGGCGCTGGCGATTCGCCTG 3744
Db         11 ATGGAAAAAACCGTTGTGATTGGCGCAGGCTTTGGTGGCCTGGCGCTGGCGATTCGCCTG 70

Qy       3745 CAAGCGGCGGGCATACCAACCACCTTACTCGAGCAGCGCGACAAACCGGGCGGACGCGCC 3804
Db         71 CAGGCGGCAGGGATCCCAACCGTACTGCTGGAGCAGCGGGACAAGCCCGGCGGTCGGGCC 130

Qy       3805 TATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCCGGACCCACGGTGATCACCGATCCC 3864
Db        131 TACGTCTGGCATGACCAGGGCTTTACCTTTGACGCCGGGCCGACGGTGATCACCGATCCT 190

Qy       3865 AGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAATCGCTCAGCGATTACGTCGAGCTG 3924
Db        191 ACCGCGCTTGAGGCGCTGTTCACCCTGGCCGGCAGGCGCATGGAGGATTACGTCAGGCTG 250

Qy       3925 ATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAAGATGGCAAACAGCTTGATTACGAC 3984
Db        251 CTGCCGGTAAAACCCTTCTACCGACTCTGCTGGGAGTCCGGGAAGACCCTCGACTATGCT 310

Qy       3985 AATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACGTTCAATCCGCAAGATGTAGAAGGC 4044
Db        311 AACGACAGCTTCGAGCTTGAGGCGCAGATTACCCAGTTCAACCCCCGCGACGTCGAGGGC 370

Qy       4045 TATCGTCAATTTCTTGCCTATTCACGTGAAGTATTTAGAGAGGGTTATCTGAAACTCGGC 4104
Db        371 TACCGGCGCTTTCTGGCTTACTCCCAGGCGGTATTCCAGGAGGGATATTTGCGCCTCGGC 430

Qy       4105 ACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGCGTCGCGCCGCAGTTGGGACGTCTG 4164
Db        431 AGCGTGCCGTTCCTCTCTTTTCGCGACATGCTGCGCGCCGGGCCGCAGCTGCTTAAGCTC 490

Qy       4165 CAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAATTTATTCAGGACGATCATCTGCGT 4224
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Qy       4225 CAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGTAATCCTTTTGCAACGTCATCGATC 4284
Db        551 CAGGCCTTCTCGTTCCACTCCCTGCTGGTAGGCGGCAACCCCTTCACCACCTCGTCCATC 610

Qy       4285 TATACCTTAATTCATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCGGCACC 4344
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Db        611 TACACCCTGATCCACGCCCTTGAGCGGGAGTGGGGGGTCTGGTTCCCTGAGGGCGGCACC 670

Qy       4345 GGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGTTACTG 4404

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Qy       5185 AGCAAGTAACGCAAACCATGGC 5206

Db       1499 ACCACGCCACGTCGACCATGGC 1520


RESULT 14
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; Sequence 9, Application US/08096623A
; Patent No. 5684238
;  GENERAL INFORMATION:
;    APPLICANT:  Ausich, Rodney L.
;    APPLICANT:  Brinkhaus, Friedhelm L.
;    APPLICANT:  Mukharji, Indrani
;    APPLICANT:  Proffitt, John H.
;    APPLICANT:  Yarger, James G.
;    APPLICANT:  Yen, Huei-Che B.
;    TITLE OF INVENTION:  Biosynthesis of Zeaxanthin and
;    TITLE OF INVENTION:  Glycosylated Zeaxanthin in Genetically Engineered Hosts
;    NUMBER OF SEQUENCES:  104
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Welsh & Katz, Ltd.
;      STREET:  120 S. Riverside Plaza, 22nd Floor
;      CITY:  Chicago
;      STATE:  IL
;      COUNTRY:  USA
;      ZIP:  60606
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/096,623A
;      FILING DATE:  22-JUL-1993
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/805,061
;      FILING DATE:  09-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/662,921
;      FILING DATE:  28-FEB-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/562,674
;      FILING DATE:  03-AUG-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/525,551
;      FILING DATE:  18-MAY-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/487,613
;      FILING DATE:  02-MAR-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Gamson, Edward P.
;      REGISTRATION NUMBER:  29,381
;      REFERENCE/DOCKET NUMBER:  AMO-006.1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (312) 655-1500
;      TELEFAX:  (312) 655-1501
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1522 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    POSITION IN GENOME:
;      MAP POSITION:  -10 to 1512
;      UNITS:  bp
US-08-096-623A-9

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  Best Local Similarity   67.6%;  Pred. No. 1.2e-172;
  Matches 1029;  Conservative    0;  Mismatches  481;  Indels   12;  Gaps    2;

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Qy       4345 GGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGTTACTG 4404

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Qy       4405 AATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGTTAGAG 4464

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Qy       4465 GGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATACCTAC 4524

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; Sequence 6, Application US/08660645A
; Patent No. 6087152
; GENERAL INFORMATION:
; APPLICANT: Hohmann, Hans-Peter
; APPLICANT: Pasamontes, Luis
; APPLICANT: Tessier, Michel
; APPLICANT: van Loon, Adolphus
; TITLE OF INVENTION: FERMENTATIVE CAROTENOID PRODUCTION
; NUMBER OF SEQUENCES: 47
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: NJ
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/660,645A
; FILING DATE: 07-JUN-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 95108888.9
; FILING DATE: 09-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: RAN 6002/170
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-2363
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1482 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-660-645A-6

Query Match 8.8%; Score 619.4; DB 3; Length 1482;
Best Local Similarity 63.7%; Pred. No. 1.2e-149;
Matches 941; Conservative 0; Mismatches 536; Indels 0; Gaps 0;

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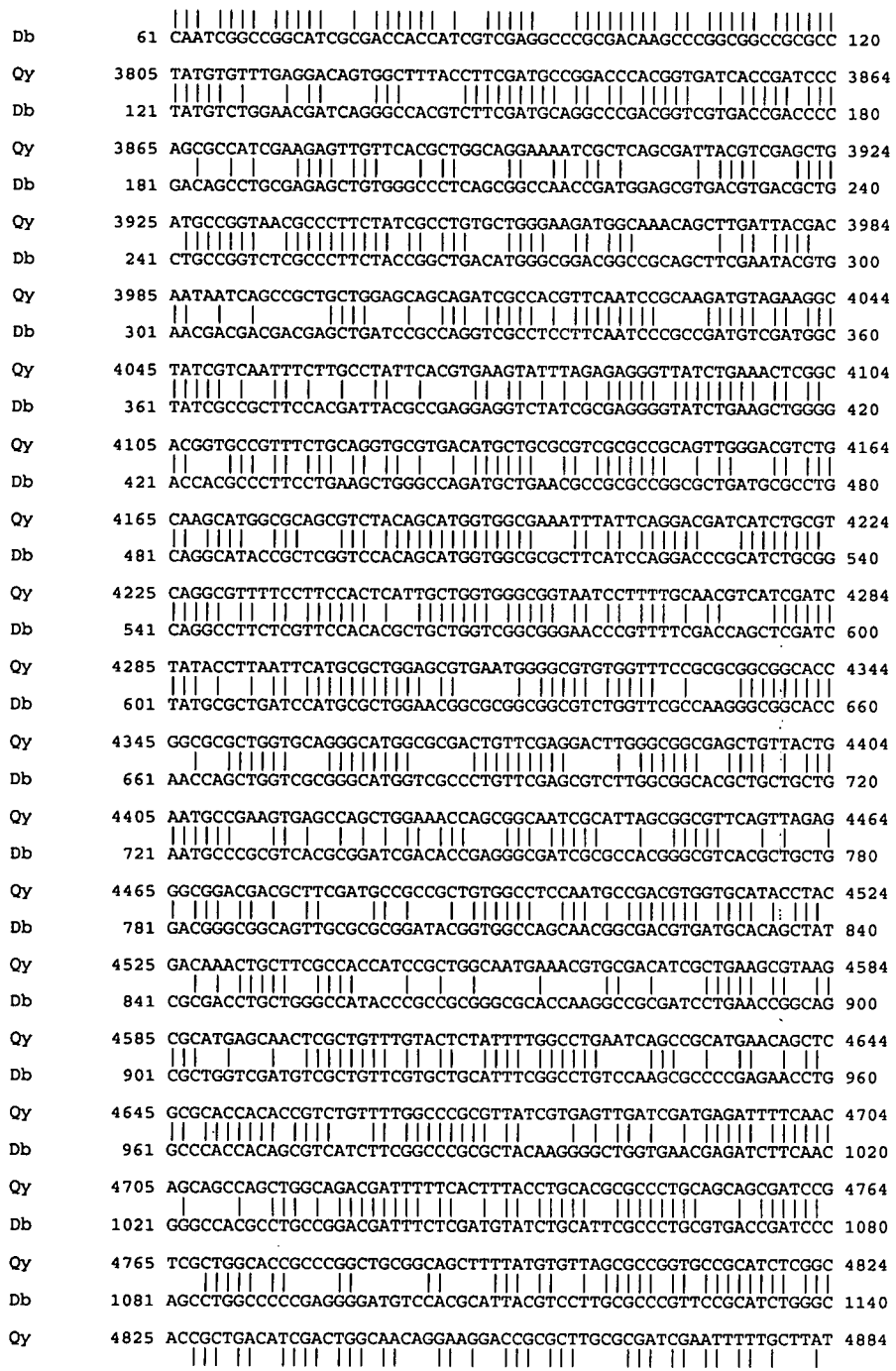

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Job time : 1193 secs

OM nucleic - nucleic search, using sw model

Run on: November 24, 2005, 20:30:31 ; Search time 4690 Seconds
(without alignments)
12340.592 Million cell updates/sec

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Perfect score: 6999
Sequence: 1 gcgatggcaatggaaaatgt.....gacgttttagacatgcaata 6999

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 9793542 seqs, 4134689005 residues

Total number of hits satisfying chosen parameters: 19587084

Minimum DB seq length: 0
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Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	6999	100.0	6999	8	US-10-808-979-18	Sequence 18, Appl
2	4326.2	61.8	8675	8	US-10-804-677-18	Sequence 18, Appl
3	2619.6	37.4	8609	7	US-10-735-008-43	Sequence 43, Appl
4	2619.6	37.4	8609	8	US-10-735-019-28	Sequence 28, Appl
5	2619.6	37.4	8609	8	US-10-734-778-40	Sequence 40, Appl
6	2619.6	37.4	8609	8	US-10-734-936-37	Sequence 37, Appl
7	2619.6	37.4	8609	8	US-10-735-442-64	Sequence 64, Appl
8	2619.6	37.4	8609	8	US-10-886-906-54	Sequence 54, Appl
9	2619.6	37.4	8609	9	US-10-987-524-49	Sequence 49, Appl
10	2533.4	36.2	9127	8	US-10-810-733-20	Sequence 20, Appl
11	2138.6	30.6	8814	8	US-10-808-807-18	Sequence 18, Appl
12	2138.6	30.6	8814	9	US-10-997-844-41	Sequence 41, Appl
13	2138.6	30.6	8814	10	US-11-015-433-12	Sequence 12, Appl
14	2135.2	30.5	12753	7	US-10-041-018-19	Sequence 19, Appl
15	1661.4	23.7	5632	9	US-10-997-844-6	Sequence 6, Appli
16	1661.4	23.7	5632	10	US-11-015-433-15	Sequence 15, Appl
17	1618.8	23.1	7494	8	US-10-474-536-45	Sequence 45, Appl
18	1618.8	23.1	8547	8	US-10-474-536-46	Sequence 46, Appl
19	1583.2	22.6	3611	9	US-10-997-844-36	Sequence 36, Appl
20	1482	21.2	1482	8	US-10-808-979-7	Sequence 7, Appli
21	1278	18.3	1278	8	US-10-808-979-3	Sequence 3, Appli
22	1167	16.7	1167	8	US-10-808-979-5	Sequence 5, Appli
23	1085.2	15.5	1482	8	US-10-804-677-7	Sequence 7, Appli
c 24	1035.4	14.8	8625	3	US-09-920-923-1	Sequence 1, Appli
c 25	1035.4	14.8	8625	7	US-10-695-980-1	Sequence 1, Appli
c 26	1035.4	14.8	11233	3	US-09-920-923-27	Sequence 27, Appl
c 27	1035.4	14.8	11233	7	US-10-695-980-27	Sequence 27, Appl
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30	887	12.7	1482	8	US-10-810-733-9	Sequence 9, Appli
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32	861.4	12.3	1479	8	US-10-808-807-7	Sequence 7, Appli
33	810.2	11.6	1479	9	US-10-987-524-17	Sequence 17, Appl
34	808.6	11.6	1479	3	US-09-941-947A-31	Sequence 31, Appl
35	808.6	11.6	1479	6	US-10-218-118-7	Sequence 7, Appli
36	808.6	11.6	1479	7	US-10-363-567-31	Sequence 31, Appl
37	808.6	11.6	1479	7	US-10-466-656-7	Sequence 7, Appli
38	808.6	11.6	1479	7	US-10-735-008-7	Sequence 7, Appli
39	808.6	11.6	1479	8	US-10-735-019-7	Sequence 7, Appli
40	808.6	11.6	1479	8	US-10-734-778-7	Sequence 7, Appli
41	808.6	11.6	1479	8	US-10-735-442-7	Sequence 7, Appli
42	808.6	11.6	1479	8	US-10-848-307-7	Sequence 7, Appli
43	808.6	11.6	1479	8	US-10-886-906-7	Sequence 7, Appli
44	808.6	11.6	1479	9	US-10-987-524-7	Sequence 7, Appli
45	805.4	11.5	1479	9	US-10-987-524-19	Sequence 19, Appl

ALIGNMENTS

RESULT 1
US-10-808-979-18
; Sequence 18, Application US/10808979
; Publication No. US20040268439A1
; GENERAL INFORMATION:
; APPLICANT: E.I. duPont de Nemours and Company, Inc.
; APPLICANT: Cheng, Qiong
; APPLICANT: Tao, Luan
; TITLE OF INVENTION: GENES ENCODING CAROTENOID COMPOUNDS
; FILE REFERENCE: CL2360 US NA
; CURRENT APPLICATION NUMBER: US/10/808,979
; CURRENT FILING DATE: 2004-03-25
; PRIOR APPLICATION NUMBER: US 60/471,904
; PRIOR FILING DATE: 2003-05-20
; PRIOR APPLICATION NUMBER: US 60/527,083
; PRIOR FILING DATE: 2003-12-03
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 18
; LENGTH: 6999
; TYPE: DNA
; ORGANISM: Enterobacteriaceae strain DC260
US-10-808-979-18

instant

Query Match 100.0%; Score 6999; DB 8; Length 6999;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 6999; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db        361 AGCGAACTCCTTCAGCTGCAGCAAATTTTACAGGCGCATCTTGAACATTTACTGCCTGCC 420
Qy        421 GGACAGCAAAGCGATCGCGTGCGTGCCGCGATGCGTGCCGGAACGCTGGCGCAGGGCAAA 480
Db        421 GGACAGCAAAGCGATCGCGTGCGTGCCGCGATGCGTGCCGGAACGCTGGCGCAGGGCAAA 480
Qy        481 CGTATTCGTCCTTTATTACTGCTGCTGGCAGCGCGCGATATGGGTTGCGAGCTGACGCAA 540
Db        481 CGTATTCGTCCTTTATTACTGCTGCTGGCAGCGCGCGATATGGGTTGCGAGCTGACGCAA 540
Qy        541 AATGGCGTTCTCGATCTCGCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGATTCTG 600
Db        541 AATGGCGTTCTCGATCTCGCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGATTCTG 600
Qy        601 GATGACATTCCCTCGATGGATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGCATCGC 660
Db        601 GATGACATTCCCTCGATGGATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGCATCGC 660
Qy        661 GAATTTGGTGAAAACGTGGCGATTCTCGCCGCCATCGCGCTGCTTAGCCGCGCATTTGAA 720
Db        661 GAATTTGGTGAAAACGTGGCGATTCTCGCCGCCATCGCGCTGCTTAGCCGCGCATTTGAA 720
Qy        721 GTGATTGCCATTGCACCCGGTTTGCCTGCCATACATAAATCTGAAGCGATTGCTGAACTC 780
Db        721 GTGATTGCCATTGCACCCGGTTTGCCTGCCATACATAAATCTGAAGCGATTGCTGAACTC 780
Qy        781 TCCGCTGCCGTCGGCCTGCAGGGCTTAGTGCAAGGGCAATTCCAGGATCTGCACGACGGC 840
Db        781 TCCGCTGCCGTCGGCCTGCAGGGCTTAGTGCAAGGGCAATTCCAGGATCTGCACGACGGC 840
Qy        841 ACGCAGAGCCGCAGCCCGGAAGCGATCGCCATGACCAACGAACTGAAAACCAGCGTGCTG 900
Db        841 ACGCAGAGCCGCAGCCCGGAAGCGATCGCCATGACCAACGAACTGAAAACCAGCGTGCTG 900
Qy        901 TTTCGCGCCACGCTGCAAATGGCGGCGATTGCCGCTGACGCTTCACCGCAGGTGCGGCAA 960
Db        901 TTTCGCGCCACGCTGCAAATGGCGGCGATTGCCGCTGACGCTTCACCGCAGGTGCGGCAA 960
Qy        961 AGACTTAGCTTCTTCGCCCAGGATTTGGGCCAGGCGTTTCAACTGCTCGACGACCTCGCC 1020
Db        961 AGACTTAGCTTCTTCGCCCAGGATTTGGGCCAGGCGTTTCAACTGCTCGACGACCTCGCC 1020
Qy       1021 GACGGTTGCAAACACACCGGTAAAGATGTGCACCAGGATCAGGGCAAATCCACGCTGGTA 1080
Db       1021 GACGGTTGCAAACACACCGGTAAAGATGTGCACCAGGATCAGGGCAAATCCACGCTGGTA 1080
Qy       1081 CAGATGCTCGGTGCTGACGGCGCGGAACGTCGCCTGCGCGATCACCTGCGCAGCGCAGAT 1140
Db       1081 CAGATGCTCGGTGCTGACGGCGCGGAACGTCGCCTGCGCGATCACCTGCGCAGCGCAGAT 1140
Qy       1141 GCACACCTTGCCTGCGCCTGCCATCGCGGCATCGCCACTCGCCAATATATGCACGCGCTG 1200
Db       1141 GCACACCTTGCCTGCGCCTGCCATCGCGGCATCGCCACTCGCCAATATATGCACGCGCTG 1200
Qy       1201 TTTAATCAACAGCTAGCGATATTCAACTGAGCGCGGCTCAGCCGGTGGGCCACTTTGCGG 1260
Db       1201 TTTAATCAACAGCTAGCGATATTCAACTGAGCGCGGCTCAGCCGGTGGGCCACTTTGCGG 1260
Qy       1261 TGATCGCGCCGCCGCTCTACAGCCACTTTCACGCGTTGCAGGCGTTAGCACAAACGCTGC 1320
Db       1261 TGATCGCGCCGCCGCTCTACAGCCACTTTCACGCGTTGCAGGCGTTAGCACAAACGCTGC 1320
Qy       1321 TGGCGCGCGGCCATCGCATCACATTCATCCAGCAAGCCGATGCCCGCACTTTGCTTAGCG 1380
Db       1321 TGGCGCGCGGCCATCGCATCACATTCATCCAGCAAGCCGATGCCCGCACTTTGCTTAGCG 1380
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Qy       1381 ACGAACGCATCGATTTTGTTGCCGTCGGCCAACAGACGCATCCTGCCGGTTCGCTGGCGC 1440
Db       1381 ACGAACGCATCGATTTTGTTGCCGTCGGCCAACAGACGCATCCTGCCGGTTCGCTGGCGC 1440
Qy       1441 CCGTGTTGCATCGGCTGGCCTCGCCGGGCGGCCTGTCGCTGTTTCGCGTGATCGACGATC 1500
Db       1441 CCGTGTTGCATCGGCTGGCCTCGCCGGGCGGCCTGTCGCTGTTTCGCGTGATCGACGATC 1500
Qy       1501 TCGCGTCCTGCACCGATATGCTGTGCCGCGAACTGCCTGCGGTACTGAAAGCATTGAACA 1560
Db       1501 TCGCGTCCTGCACCGATATGCTGTGCCGCGAACTGCCTGCGGTACTGAAAGCATTGAACA 1560
Qy       1561 TCGATGGCGTGATCGCCGACGAAATGGAAGCGGCGGGCGGATTGGTCGCTGAAGCGCTGC 1620
Db       1561 TCGATGGCGTGATCGCCGACGAAATGGAAGCGGCGGGCGGATTGGTCGCTGAAGCGCTGC 1620
Qy       1621 ATCTGCCGTTTGTTTCGGTGGCCTGCGCCTTGCCGGTCAATCGTGAAGCCGGGATTCCGC 1680
Db       1621 ATCTGCCGTTTGTTTCGGTGGCCTGCGCCTTGCCGGTCAATCGTGAAGCCGGGATTCCGC 1680
Qy       1681 TTGCGGTGATGCCCTTCCGTTTTGCACAGGATGACAAAGCGCTGAAACGTTTTCAGGCCA 1740
Db       1681 TTGCGGTGATGCCCTTCCGTTTTGCACAGGATGACAAAGCGCTGAAACGTTTTCAGGCCA 1740
Qy       1741 GCAGCGATATCTATGATCGCATCATGCGTCGTCACGGCGACGTGATCCTCAAACACGCGC 1800
Db       1741 GCAGCGATATCTATGATCGCATCATGCGTCGTCACGGCGACGTGATCCTCAAACACGCGC 1800
Qy       1801 GGGCGTTTAATTTGACGGAGCGGCGCGGATTACATCAGTGCCTGTCGCCGCTGGCACAAA 1860
Db       1801 GGGCGTTTAATTTGACGGAGCGGCGCGGATTACATCAGTGCCTGTCGCCGCTGGCACAAA 1860
Qy       1861 TCAGCCAGATGGTGCCGGCCTTTGATTTTCCACGTCAGCAACTGCCCGCCTGCTATCACG 1920
Db       1861 TCAGCCAGATGGTGCCGGCCTTTGATTTTCCACGTCAGCAACTGCCCGCCTGCTATCACG 1920
Qy       1921 CCGTGGGGCCACTCCGCGCCCCGGTTTCTCCTGCGCCGCTCCATGCGCCCTGGCCAGCGC 1980
Db       1921 CCGTGGGGCCACTCCGCGCCCCGGTTTCTCCTGCGCCGCTCCATGCGCCCTGGCCAGCGC 1980
Qy       1981 TGCGTCAGCCGGTGGTTTATGCCTCGCTGGGTACGCTGCAAGGCCATCGCTTCCGGCTGT 2040
Db       1981 TGCGTCAGCCGGTGGTTTATGCCTCGCTGGGTACGCTGCAAGGCCATCGCTTCCGGCTGT 2040
Qy       2041 TTCTGCATCTGGCGCAGGCGTGCCGCCAGCTGCGGCTATCGCTGGTGATCGCCCATTGTG 2100
Db       2041 TTCTGCATCTGGCGCAGGCGTGCCGCCAGCTGCGGCTATCGCTGGTGATCGCCCATTGTG 2100
Qy       2101 GGGGATTAAACGCCGAACAGACGCATCAGCTGGAGCTCGCTGGCGCGGCGTGGGTGACGG 2160
Db       2101 GGGGATTAAACGCCGAACAGACGCATCAGCTGGAGCTCGCTGGCGCGGCGTGGGTGACGG 2160
Qy       2161 ATTTCGTCGATCAGCGCGCAGCCCTACAGCACGCGCAGCTGTTTATCACTCATGCCGGGT 2220
Db       2161 ATTTCGTCGATCAGCGCGCAGCCCTACAGCACGCGCAGCTGTTTATCACTCATGCCGGGT 2220
Qy       2221 TAAACAGCGCGCTGGAAGCACTGGAATGCGGTACGCCGATGCTGGCGCTGCCGATTGCTT 2280
Db       2221 TAAACAGCGCGCTGGAAGCACTGGAATGCGGTACGCCGATGCTGGCGCTGCCGATTGCTT 2280
Qy       2281 TTGATCAGCCCGGCGTGGCGGCGCGCATTGAGTGGCATGACGTTGGTCGCCGCGCATCAC 2340
Db       2281 TTGATCAGCCCGGCGTGGCGGCGCGCATTGAGTGGCATGACGTTGGTCGCCGCGCATCAC 2340
Qy       2341 GCTTTAGCCGTGTTCATCAACTGGAGCAGCATCTGCAACAGCTGCTGACCGACGATCGTT 2400
Db       2341 GCTTTAGCCGTGTTCATCAACTGGAGCAGCATCTGCAACAGCTGCTGACCGACGATCGTT 2400
Qy       2401 ACGCGCTACGGATGTCAGCGATTCAGGCGCAGCTGCAGCGCGCAGGCGGTTGCCAGCGTG 2460
Db       2401 ACGCGCTACGGATGTCAGCGATTCAGGCGCAGCTGCAGCGCGCAGGCGGTTGCCAGCGTG 2460
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Qy       2461 CCGCCGACATCGTCGAGCAGGCGCTGTGCCAGCAGCAAGTCGTGCTGGCGGAGGCGACCT 2520
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2461 CCGCCGACATCGTCGAGCAGGCGCTGTGCCAGCAGCAAGTCGTGCTGGCGGAGGCGACCT 2520

Qy       2521 GATGCGCACGCAATACGATGTGATTTTGGTCGGTGCTGGACTGGCGAATGGCTTGATTGC 2580
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2521 GATGCGCACGCAATACGATGTGATTTTGGTCGGTGCTGGACTGGCGAATGGCTTGATTGC 2580

Qy       2581 GCTGCGTCTGCGTCAATTGCAGCCACAACTGAAATGCCTGTTGCTGGAGAGCGATGCGCA 2640
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2581 GCTGCGTCTGCGTCAATTGCAGCCACAACTGAAATGCCTGTTGCTGGAGAGCGATGCGCA 2640

Qy       2641 TCCGGCAGGCAATCATACCTGGTCGTTTCATCACAGCGATCTCAGCGCCGAACAACTTCG 2700
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2641 TCCGGCAGGCAATCATACCTGGTCGTTTCATCACAGCGATCTCAGCGCCGAACAACTTCG 2700

Qy       2701 CTGGCTGCAACCGCTGATTACCGTGCGTTGGTCAGGTTATCAGGTGCGTTTTCCTGCGCT 2760
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2701 CTGGCTGCAACCGCTGATTACCGTGCGTTGGTCAGGTTATCAGGTGCGTTTTCCTGCGCT 2760

Qy       2761 GCGCCGCAATCTGGACGGGGATTATTGTTCCATCGCATCAGGCGATTTTGCCCGCCATCT 2820
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2761 GCGCCGCAATCTGGACGGGGATTATTGTTCCATCGCATCAGGCGATTTTGCCCGCCATCT 2820

Qy       2821 TTACGCGGCGATGGGTGACGATCTGTGGACAAACACAGCCGTACAACAGGTAAAACCCAC 2880
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2821 TTACGCGGCGATGGGTGACGATCTGTGGACAAACACAGCCGTACAACAGGTAAAACCCAC 2880

Qy       2881 GCAGGTGACGCTGGCGGATGGCCGTGAACTTGCTGCGCAAGTGGTGATTGATGGTCGCGG 2940
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2881 GCAGGTGACGCTGGCGGATGGCCGTGAACTTGCTGCGCAAGTGGTGATTGATGGTCGCGG 2940

Qy       2941 CCTGCAGCCGACGCCACATCTGCAGCTGGGTTATCAGGTGTTTCTTGGACAAGAGTGGCA 3000
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2941 CCTGCAGCCGACGCCACATCTGCAGCTGGGTTATCAGGTGTTTCTTGGACAAGAGTGGCA 3000

Qy       3001 GCTGGCGCAGCCGCACGGCCTGCAGCAGCCGATCCTGATGGATGCCACCGTCGATCAGCA 3060
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3001 GCTGGCGCAGCCGCACGGCCTGCAGCAGCCGATCCTGATGGATGCCACCGTCGATCAGCA 3060

Qy       3061 AGCGGGTTATCGTTTTGTCTACACGCTGCCGCTCAGCGCCGATCGGCTATTGATTGAAGA 3120
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3061 AGCGGGTTATCGTTTTGTCTACACGCTGCCGCTCAGCGCCGATCGGCTATTGATTGAAGA 3120

Qy       3121 TACCCATTACGTTAACCAGCCCGCGCTGGCGGAGAACACCGCTCGTCAGCACATCGCCGA 3180
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3121 TACCCATTACGTTAACCAGCCCGCGCTGGCGGAGAACACCGCTCGTCAGCACATCGCCGA 3180

Qy       3181 CTATGCCAATCAGCAAGGCTGGACGCTGAGTACGCTGCTGCGTGAAGAGCACGGCATATT 3240
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3181 CTATGCCAATCAGCAAGGCTGGACGCTGAGTACGCTGCTGCGTGAAGAGCACGGCATATT 3240

Qy       3241 ACCGATTACCCTGAGCGGCAACATCGATCGATTCTGGCAACAGCAGCGCGGCCAAGCGTG 3300
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3241 ACCGATTACCCTGAGCGGCAACATCGATCGATTCTGGCAACAGCAGCGCGGCCAAGCGTG 3300

Qy       3301 CAGCGGCCTGCGCGCCGGGCTGTTTCATGCCACCACCGGTTACTCCTTGCCGTCCGCCGT 3360
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3301 CAGCGGCCTGCGCGCCGGGCTGTTTCATGCCACCACCGGTTACTCCTTGCCGTCCGCCGT 3360

Qy       3361 GGCGCTAGCGGAGTTGGTAGCAGCGCTGTTGCCCACCGATGCCCTCACGCTCAGCCAACA 3420
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3361 GGCGCTAGCGGAGTTGGTAGCAGCGCTGTTGCCCACCGATGCCCTCACGCTCAGCCAACA 3420

Qy       3421 TATCGAACGCTTTGCCCGTCAGCAGTGGCGCGAACAGCGATTTTTCCGTCTGCTAAACCG 3480
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3421 TATCGAACGCTTTGCCCGTCAGCAGTGGCGCGAACAGCGATTTTTCCGTCTGCTAAACCG 3480

Qy       3481 CATGCTGTTTTTGGCCGGTAAGCCGCAGCAGCGCTGGCGCGTGATGCAACGTTTTTACCG 3540
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3481 CATGCTGTTTTTGGCCGGTAAGCCGCAGCAGCGCTGGCGCGTGATGCAACGTTTTTACCG 3540

Qy       3541 GCTCGATGCCGGGTTAATTAGCCGCTTTTACGCCGGGCAACTGCGCCTGCGCGATAAAAC 3600
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3541 GCTCGATGCCGGGTTAATTAGCCGCTTTTACGCCGGGCAACTGCGCCTGCGCGATAAAAC 3600

Qy       3601 GCGGATTCTGTGCGGCAAGCCGCCGGTGCCCATCGGTGAAGCGCTGCGCGCGCTGTTGAA 3660
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3601 GCGGATTCTGTGCGGCAAGCCGCCGGTGCCCATCGGTGAAGCGCTGCGCGCGCTGTTGAA 3660

Qy       3661 TTCTGTCGAACCAGGGAAGAAAAAATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGC 3720
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3661 TTCTGTCGAACCAGGGAAGAAAAAATGAAACGCACTTATGTGATTGGCGCAGGCTTTGGC 3720

Qy       3721 GGCCTGGCGCTGGCGATTCGCCTGCAAGCGGCGGGCATACCAACCACCTTACTCGAGCAG 3780
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3721 GGCCTGGCGCTGGCGATTCGCCTGCAAGCGGCGGGCATACCAACCACCTTACTCGAGCAG 3780

Qy       3781 CGCGACAAACCGGGCGGACGCGCCTATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCC 3840
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3781 CGCGACAAACCGGGCGGACGCGCCTATGTGTTTGAGGACAGTGGCTTTACCTTCGATGCC 3840

Qy       3841 GGACCCACGGTGATCACCGATCCCAGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAA 3900
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3841 GGACCCACGGTGATCACCGATCCCAGCGCCATCGAAGAGTTGTTCACGCTGGCAGGAAAA 3900

Qy       3901 TCGCTCAGCGATTACGTCGAGCTGATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAA 3960
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3901 TCGCTCAGCGATTACGTCGAGCTGATGCCGGTAACGCCCTTCTATCGCCTGTGCTGGGAA 3960

Qy       3961 GATGGCAAACAGCTTGATTACGACAATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACG 4020
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3961 GATGGCAAACAGCTTGATTACGACAATAATCAGCCGCTGCTGGAGCAGCAGATCGCCACG 4020

Qy       4021 TTCAATCCGCAAGATGTAGAAGGCTATCGTCAATTTCTTGCCTATTCACGTGAAGTATTT 4080
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4021 TTCAATCCGCAAGATGTAGAAGGCTATCGTCAATTTCTTGCCTATTCACGTGAAGTATTT 4080

Qy       4081 AGAGAGGGTTATCTGAAACTCGGCACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGC 4140
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4081 AGAGAGGGTTATCTGAAACTCGGCACGGTGCCGTTTCTGCAGGTGCGTGACATGCTGCGC 4140

Qy       4141 GTCGCGCCGCAGTTGGGACGTCTGCAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAA 4200
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4141 GTCGCGCCGCAGTTGGGACGTCTGCAAGCATGGCGCAGCGTCTACAGCATGGTGGCGAAA 4200

Qy       4201 TTTATTCAGGACGATCATCTGCGTCAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGT 4260
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4201 TTTATTCAGGACGATCATCTGCGTCAGGCGTTTTCCTTCCACTCATTGCTGGTGGGCGGT 4260

Qy       4261 AATCCTTTTGCAACGTCATCGATCTATACCTTAATTCATGCGCTGGAGCGTGAATGGGGC 4320
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4261 AATCCTTTTGCAACGTCATCGATCTATACCTTAATTCATGCGCTGGAGCGTGAATGGGGC 4320

Qy       4321 GTGTGGTTTCCGCGCGGCGGCACCGGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAG 4380
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4321 GTGTGGTTTCCGCGCGGCGGCACCGGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAG 4380

Qy       4381 GACTTGGGCGGCGAGCTGTTACTGAATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAAT 4440
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4381 GACTTGGGCGGCGAGCTGTTACTGAATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAAT 4440

Qy       4441 CGCATTAGCGGCGTTCAGTTAGAGGGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCC 4500
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Db       4441 CGCATTAGCGGCGTTCAGTTAGAGGGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCC 4500

Qy       4501 AATGCCGACGTGGTGCATACCTACGACAAACTGCTTCGCCACCATCCGCTGGCAATGAAA 4560
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4501 AATGCCGACGTGGTGCATACCTACGACAAACTGCTTCGCCACCATCCGCTGGCAATGAAA 4560

Qy       4561 CGTGCGACATCGCTGAAGCGTAAGCGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGC 4620
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4561 CGTGCGACATCGCTGAAGCGTAAGCGCATGAGCAACTCGCTGTTTGTACTCTATTTTGGC 4620

Qy       4621 CTGAATCAGCCGCATGAACAGCTCGCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGT 4680
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db      4621 CTGAATCAGCCGCATGAACAGCTCGCGCACCACACCGTCTGTTTTGGCCCGCGTTATCGT 4680
Qy      4681 GAGTTGATCGATGAGATTTTCAACAGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTG 4740
Db      4681 GAGTTGATCGATGAGATTTTCAACAGCAGCCAGCTGGCAGACGATTTTTCACTTTACCTG 4740
Qy      4741 CACGCGCCCTGCAGCAGCGATCCGTCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTG 4800
Db      4741 CACGCGCCCTGCAGCAGCGATCCGTCGCTGGCACCGCCCGGCTGCGGCAGCTTTTATGTG 4800
Qy      4801 TTAGCGCCGGTGCCGCATCTCGGCACCGCTGACATCGACTGGCAACAGGAAGGACCGCGC 4860
Db      4801 TTAGCGCCGGTGCCGCATCTCGGCACCGCTGACATCGACTGGCAACAGGAAGGACCGCGC 4860
Qy      4861 TTGCGCGATCGAATTTTTGCTTATCTGGAGCAGCACTACATGCCGGGATTACGTCAGCAA 4920
Db      4861 TTGCGCGATCGAATTTTTGCTTATCTGGAGCAGCACTACATGCCGGGATTACGTCAGCAA 4920
Qy      4921 TTAGTGACACACAGAATGTTTACGCCGTTTGATTTTCGCGACACGCTGCATGCCCATCAC 4980
Db      4921 TTAGTGACACACAGAATGTTTACGCCGTTTGATTTTCGCGACACGCTGCATGCCCATCAC 4980
Qy      4981 GGCTCGGCGTTTTCGCTGGAGCCGATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAAC 5040
Db      4981 GGCTCGGCGTTTTCGCTGGAGCCGATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAAC 5040
Qy      5041 CGCGATGCCGATATCAGCAATCTCTATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGC 5100
Db      5041 CGCGATGCCGATATCAGCAATCTCTATCTGGTGGGTGCCGGTACGCATCCAGGCGCGGGC 5100
Qy      5101 GTGCCCGGCGTGATCGGTTCGGCCAAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCC 5160
Db      5101 GTGCCCGGCGTGATCGGTTCGGCCAAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCC 5160
Qy      5161 GAATGAATCGACAGCCTTTACTTGAGCAAGTAACGCAAACCATGGCGGTGGGCTCGAAGA 5220
Db      5161 GAATGAATCGACAGCCTTTACTTGAGCAAGTAACGCAAACCATGGCGGTGGGCTCGAAGA 5220
Qy      5221 GTTTCGCCACCGCCGCCAAGCTGTTTGATGCACCGACGCGCCGCAGCACGCTGATGCTGT 5280
Db      5221 GTTTCGCCACCGCCGCCAAGCTGTTTGATGCACCGACGCGCCGCAGCACGCTGATGCTGT 5280
Qy      5281 ATGCGTGGTGTCGTCACTGCGATGATGTGATTGATGGGCAAACGCTGGGCGAAGGCGGCA 5340
Db      5281 ATGCGTGGTGTCGTCACTGCGATGATGTGATTGATGGGCAAACGCTGGGCGAAGGCGGCA 5340
Qy      5341 CGCAGCATGCCGTCGAAGACGCGCAGGCACGTATGCAGCATCTGCAAATTGAAACCCGCC 5400
Db      5341 CGCAGCATGCCGTCGAAGACGCGCAGGCACGTATGCAGCATCTGCAAATTGAAACCCGCC 5400
Qy      5401 GCGCCTACAGCGGCGCGCACATGGATGAACCGGCGTTTAGGGCGTTTCAGGAAGTGGCGA 5460
Db      5401 GCGCCTACAGCGGCGCGCACATGGATGAACCGGCGTTTAGGGCGTTTCAGGAAGTGGCGA 5460
Qy      5461 TCATTCACCAGCTGCCGCAACAACTGGCGTTTGATCATCTGGAAGGCTTCGCTATGGATG 5520
Db      5461 TCATTCACCAGCTGCCGCAACAACTGGCGTTTGATCATCTGGAAGGCTTCGCTATGGATG 5520
Qy      5521 CACGCAACGAACATTACGCGAGCTTCGATGACACGCTGCGTTACTGCTATCACGTCGCGG 5580
Db      5521 CACGCAACGAACATTACGCGAGCTTCGATGACACGCTGCGTTACTGCTATCACGTCGCGG 5580
Qy      5581 GCGTGGTCGGTTTGATGATGGCGCGCGTAATGGGCGTGCGCGACGAAGCGGTGCTCGATC 5640
Db      5581 GCGTGGTCGGTTTGATGATGGCGCGCGTAATGGGCGTGCGCGACGAAGCGGTGCTCGATC 5640
Qy      5641 ACGCCTGCGATTTAGGACTGGCGTTCCAGCTCACTAACATTGCGCGCGACATTGTAGAAG 5700
Db      5641 ACGCCTGCGATTTAGGACTGGCGTTCCAGCTCACTAACATTGCGCGCGACATTGTAGAAG 5700
Qy      5701 ATGCCGAAAATGGTCGCTGCTATCTGCCGCAATCCTGGCTCGATCAGGCGGGATTACGCG 5760
Db      5701 ATGCCGAAAATGGTCGCTGCTATCTGCCGCAATCCTGGCTCGATCAGGCGGGATTACGCG 5760
Qy      5761 CCGATACGCTGACTGCACCGCAACATCGTGCAGCGCTCGCCTCACTGGCAGCGCGTTTAG 5820
Db      5761 CCGATACGCTGACTGCACCGCAACATCGTGCAGCGCTCGCCTCACTGGCAGCGCGTTTAG 5820
Qy      5821 TGGCGGAGGCGGAACCCTATTATCACTCGGCGCGATCCGGTTTACCGGGTTTACCGCTGC 5880
Db      5821 TGGCGGAGGCGGAACCCTATTATCACTCGGCGCGATCCGGTTTACCGGGTTTACCGCTGC 5880
Qy      5881 GCTCGGCGTGGGCCATCGCTACGGCTCGCGGCGTTTATCGCGAAATTGGCGTCAAAGTTC 5940
Db      5881 GCTCGGCGTGGGCCATCGCTACGGCTCGCGGCGTTTATCGCGAAATTGGCGTCAAAGTTC 5940
Qy      5941 AGCACGCCGGTGTGCACGCCTGGGATTCACGGCAGCGCACCAGTAAAGGTGAAAAACTGG 6000
Db      5941 AGCACGCCGGTGTGCACGCCTGGGATTCACGGCAGCGCACCAGTAAAGGTGAAAAACTGG 6000
Qy      6001 CGCTGCTGGTGAAAGGGGCAGGTTTGGCGATCACTTCGCGTGTGTCTCGTCCTGAACCGC 6060
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Qy      6241 CGGGATATAGCGGAACGGCCAGCGTTGATGCACCAGGCCATCGTGCACCATGAAGTAGAG 6300
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Qy      6301 CGCGCCGTACGTCGTCATTCCGGCACCAATCCACTGCAGCGGCCACATGCCTTGCACACC 6360
Db      6301 CGCGCCGTACGTCGTCATTCCGGCACCAATCCACTGCAGCGGCCACATGCCTTGCACACC 6360
Qy      6361 GACATAAATCAGCACAATCGCCAGTACCGCAAACACCACCGCATAAAGATCGTTGAGCTC 6420
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Qy      6421 AAACTTACCGCTGTGCGGTTCATGGTGCGACAGATGCCAGCCCCATCCCCAACCGTGCAT 6480
Db      6421 AAACTTACCGCTGTGCGGTTCATGGTGCGACAGATGCCAGCCCCATCCCCAACCGTGCAT 6480
Qy      6481 GATGTATTTATGCGACAGCGCCGCTACGATTTCCATCACCACCACGGTTGCCAACAAGAT 6540
Db      6481 GATGTATTTATGCGACAGCGCCGCTACGATTTCCATCACCACCACGGTTGCCAACAAGAT 6540
Qy      6541 AAGCACGTTCCATAACCAGAGCATTGTTCGTCCATTTGTGGAAAAGGGAAGTACTAAAGG 6600
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Db      6601 TGGACGCGGATGAGTGATGGCGCAAGGTTTACCATGTTTAGAAATTTTAAAAGTCCATAA 6660
Qy      6661 CACGTTATGAACGCTGCATTGCAGAAAGCGCAGATTTCACACATACTCACCACACTTATC 6720
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RESULT 2
US-10-804-677-18
; Sequence 18, Application US/10804677
; Publication No. US20040224383A1
; GENERAL INFORMATION:
; APPLICANT: E.I. duPont de Nemours and Company, Inc.
; APPLICANT: Cheng, Qiong
; APPLICANT: Tao, Luan
; APPLICANT: Sedkova, Natalia
; TITLE OF INVENTION: GENES ENCODING CAROTENOID COMPOUNDS
; FILE REFERENCE: CL2346 US NA
; CURRENT APPLICATION NUMBER: US/10/804,677
; CURRENT FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: US 60/468,596
; PRIOR FILING DATE: 2003-05-07
; PRIOR APPLICATION NUMBER: US 60/527,083
; PRIOR FILING DATE: 2003-12-03
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 18
; LENGTH: 8675
; TYPE: DNA
; ORGANISM: Pectobacterium cypripedii DC416
US-10-804-677-18

Query Match 61.8%; Score 4326.2; DB 8; Length 8675;
Best Local Similarity 80.1%; Pred. No. 0;
Matches 5122; Conservative 0; Mismatches 1268; Indels 5; Gaps 3;

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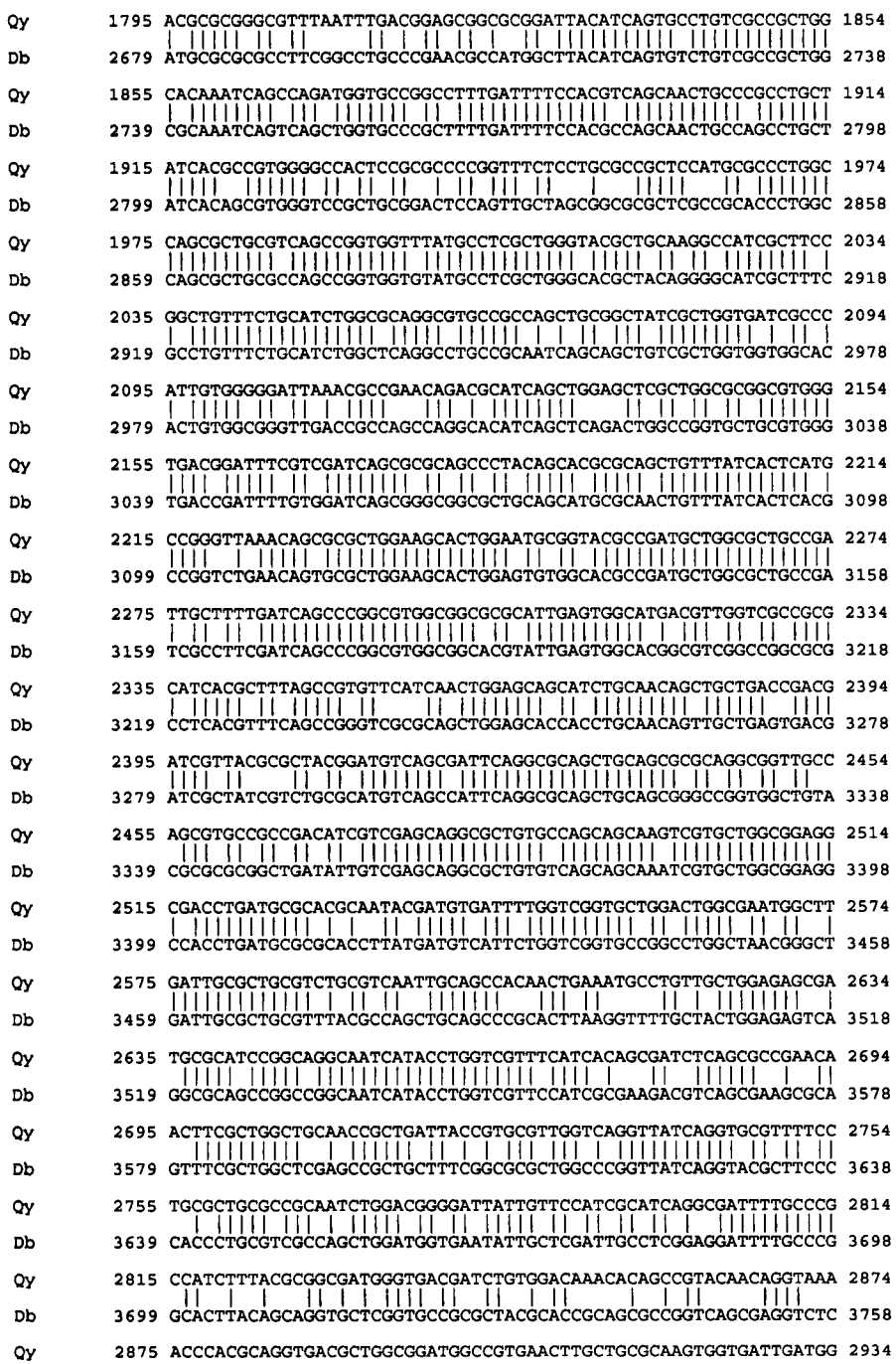
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Qy 3712 GGCTTTGGCGGCCTGGCGCTGGCGATTCGCCTGCAAGCGGCGGGCATACCAACCACCTTA 3771
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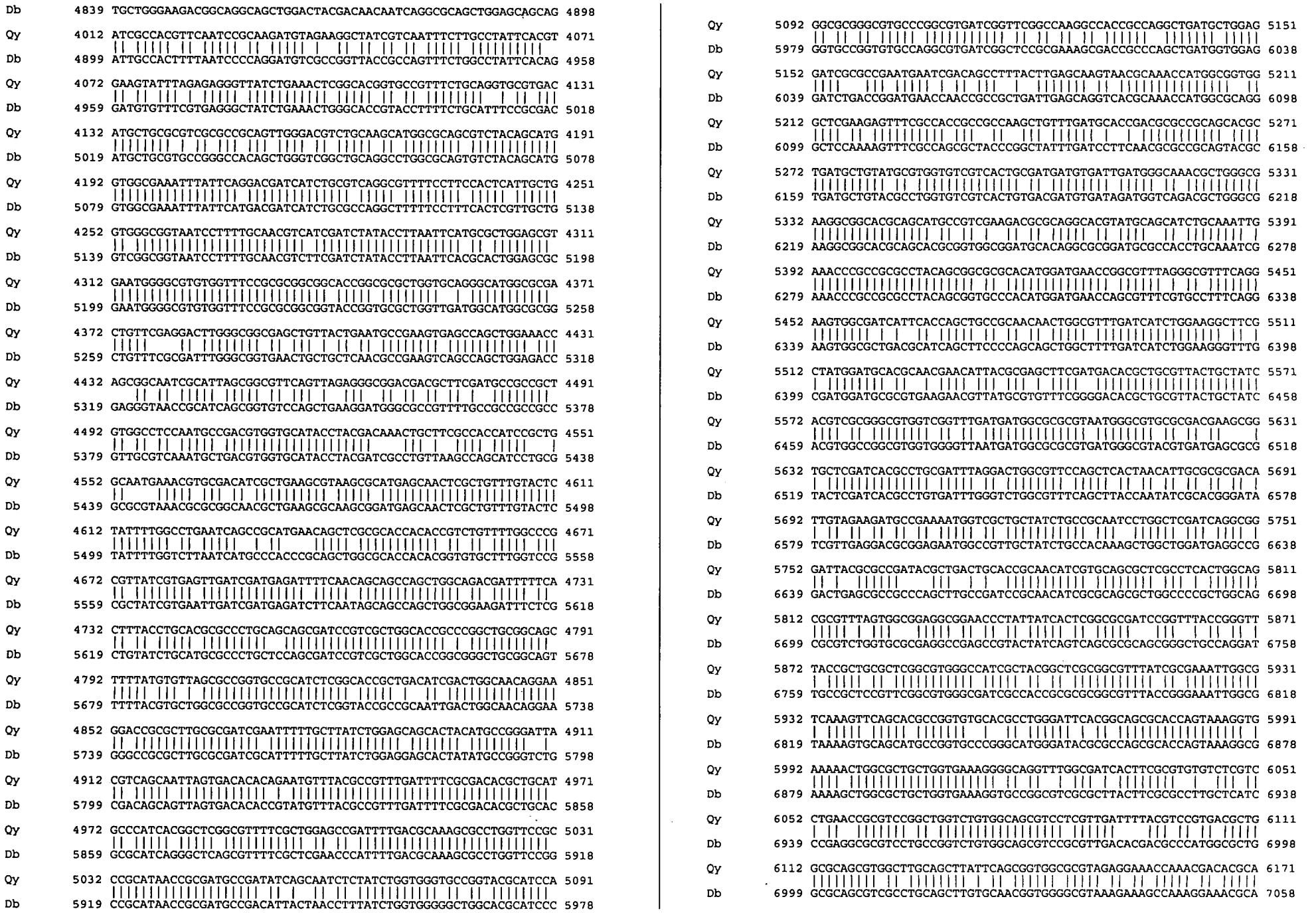

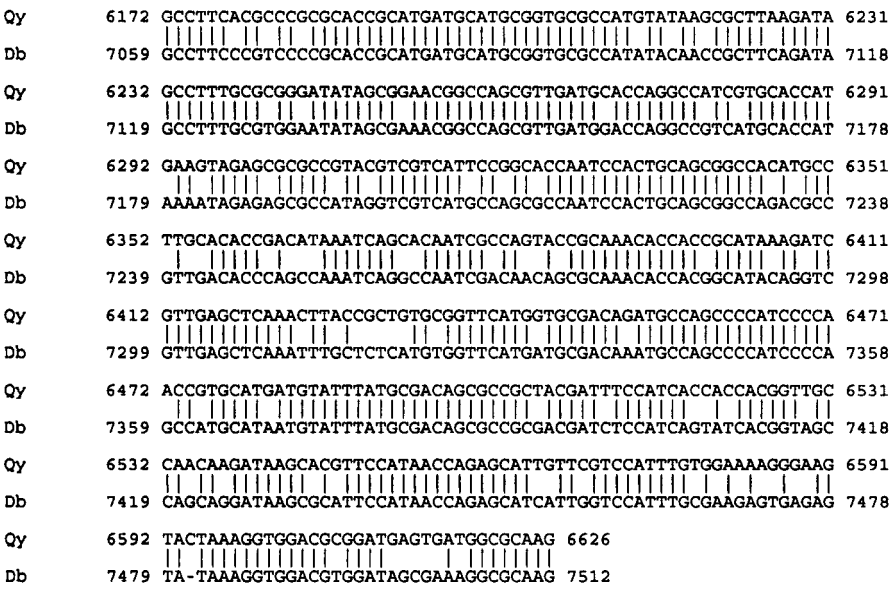

RESULT 3
US-10-735-008-43
; Sequence 43, Application US/10735008
; Publication No. US20040146966A1
; GENERAL INFORMATION:
; APPLICANT: E. I. duPont de Nemours and Company, Inc.
; APPLICANT: Cheng, Qiong
; APPLICANT: Rouviere, Pierre
; APPLICANT: Tao, Luan
; TITLE OF INVENTION: Mutations Affecting Carotenoid Production
; FILE REFERENCE: CL-2028 US NA
; CURRENT APPLICATION NUMBER: US/10/735,008
; CURRENT FILING DATE: 2003-12-12
; PRIOR APPLICATION NUMBER: US 60/435612
; PRIOR FILING DATE: 2002-12-19
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: PatentIn version 3.2
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; LENGTH: 8609
; TYPE: DNA
; ORGANISM: Artificial sequence
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; OTHER INFORMATION: Reporter plasmid pPCB15
US-10-735-008-43

Query Match 37.4%; Score 2619.6; DB 7; Length 8609;
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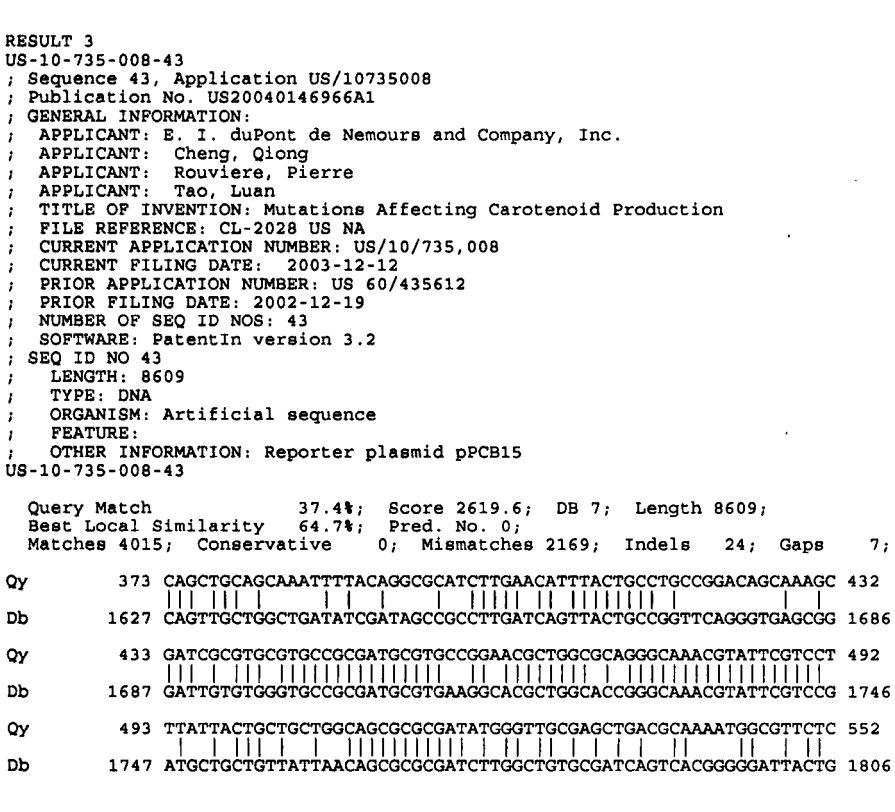
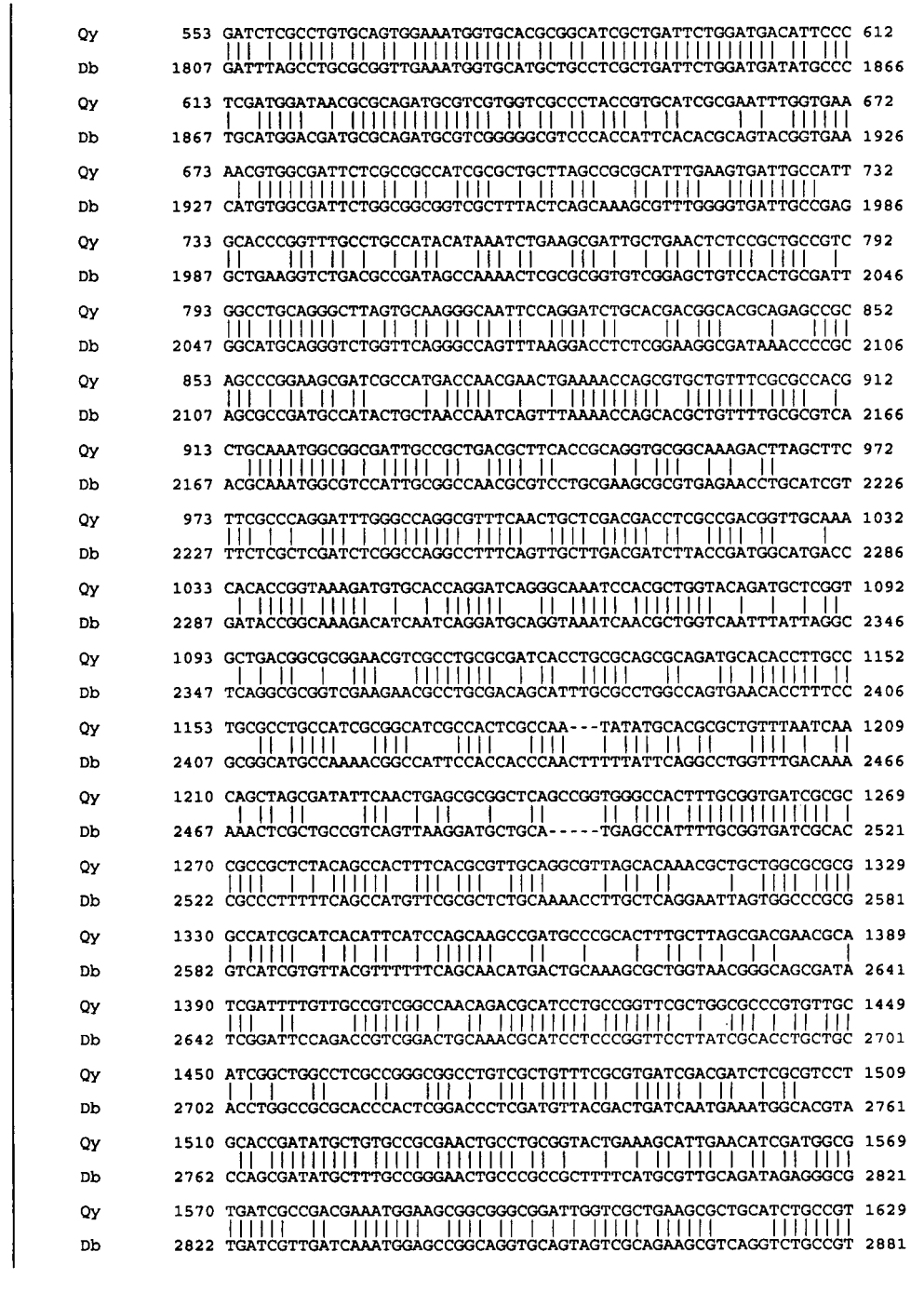
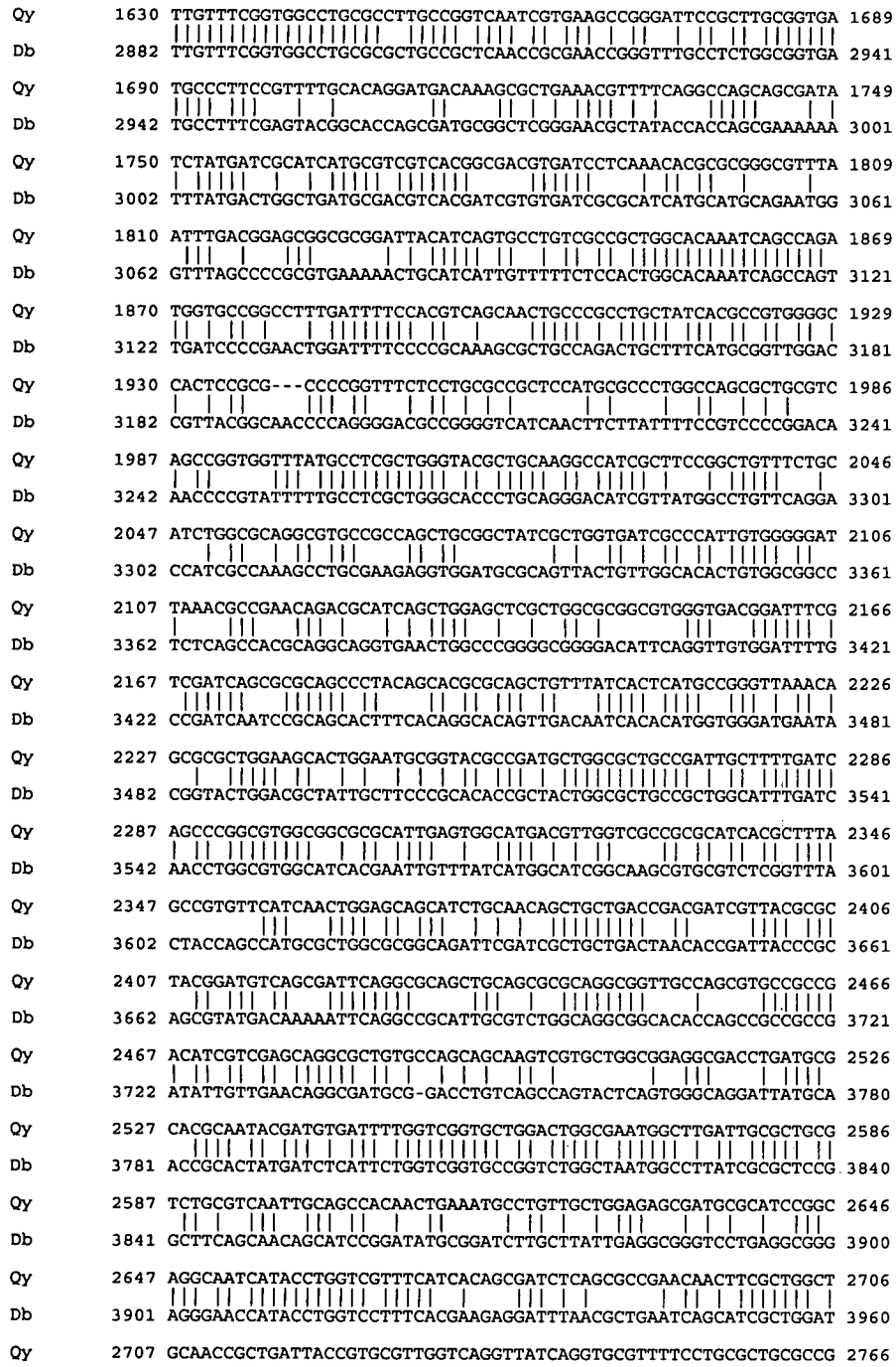
Matches 4015; Conservative 0; Mismatches 2169; Indels 24; Gaps 7;



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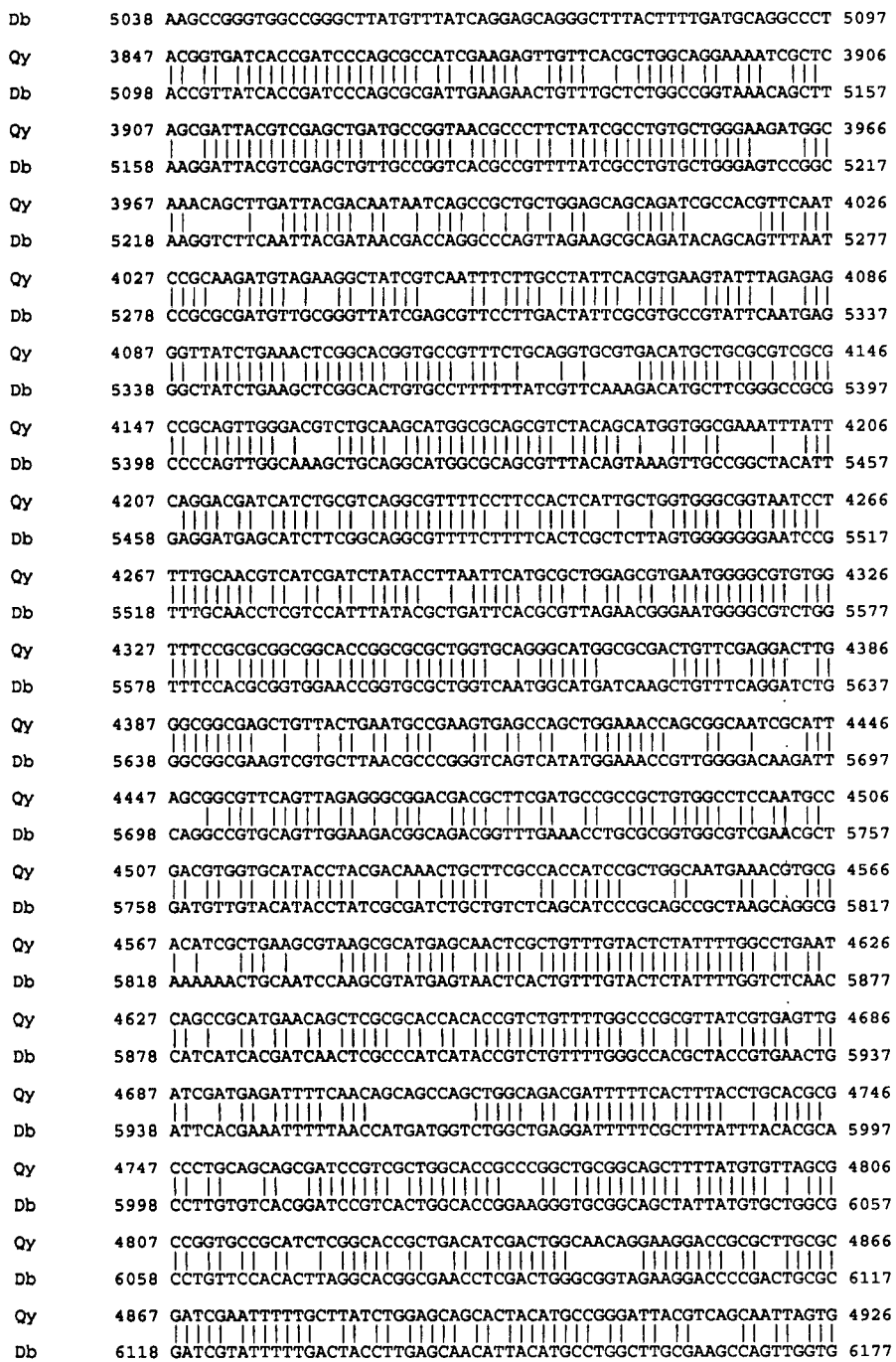
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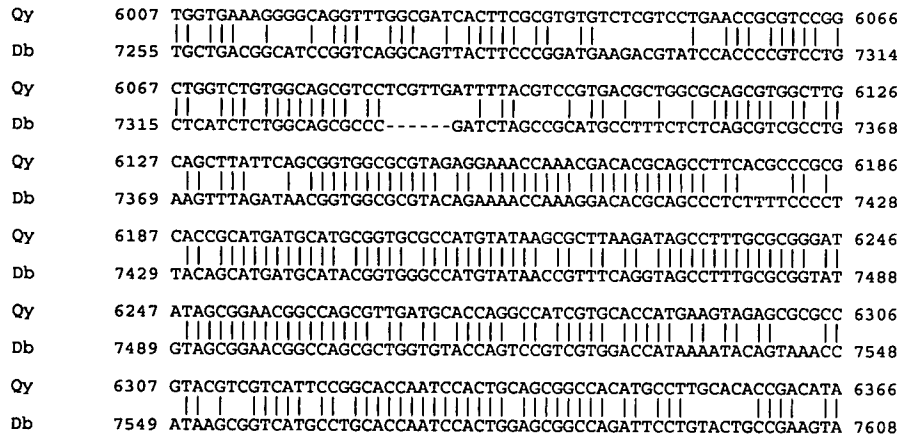

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; Publication No. US20040191863A1
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; APPLICANT: E. I. duPont de Nemours and Company, Inc.
; APPLICANT: Cheng, Qiong
; APPLICANT: Suh, Wonchul
; TITLE OF INVENTION: Mutations Affecting Plasmid Copy Number
; FILE REFERENCE: CL2029 US NA
; CURRENT APPLICATION NUMBER: US/10/735,019
; CURRENT FILING DATE: 2003-12-12
; PRIOR APPLICATION NUMBER: US 60/434973
; PRIOR FILING DATE: 2002-12-20
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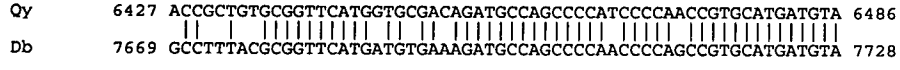

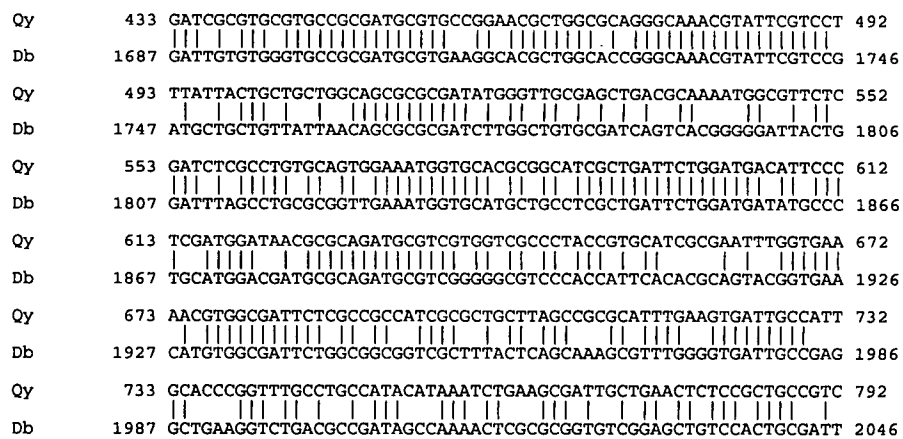

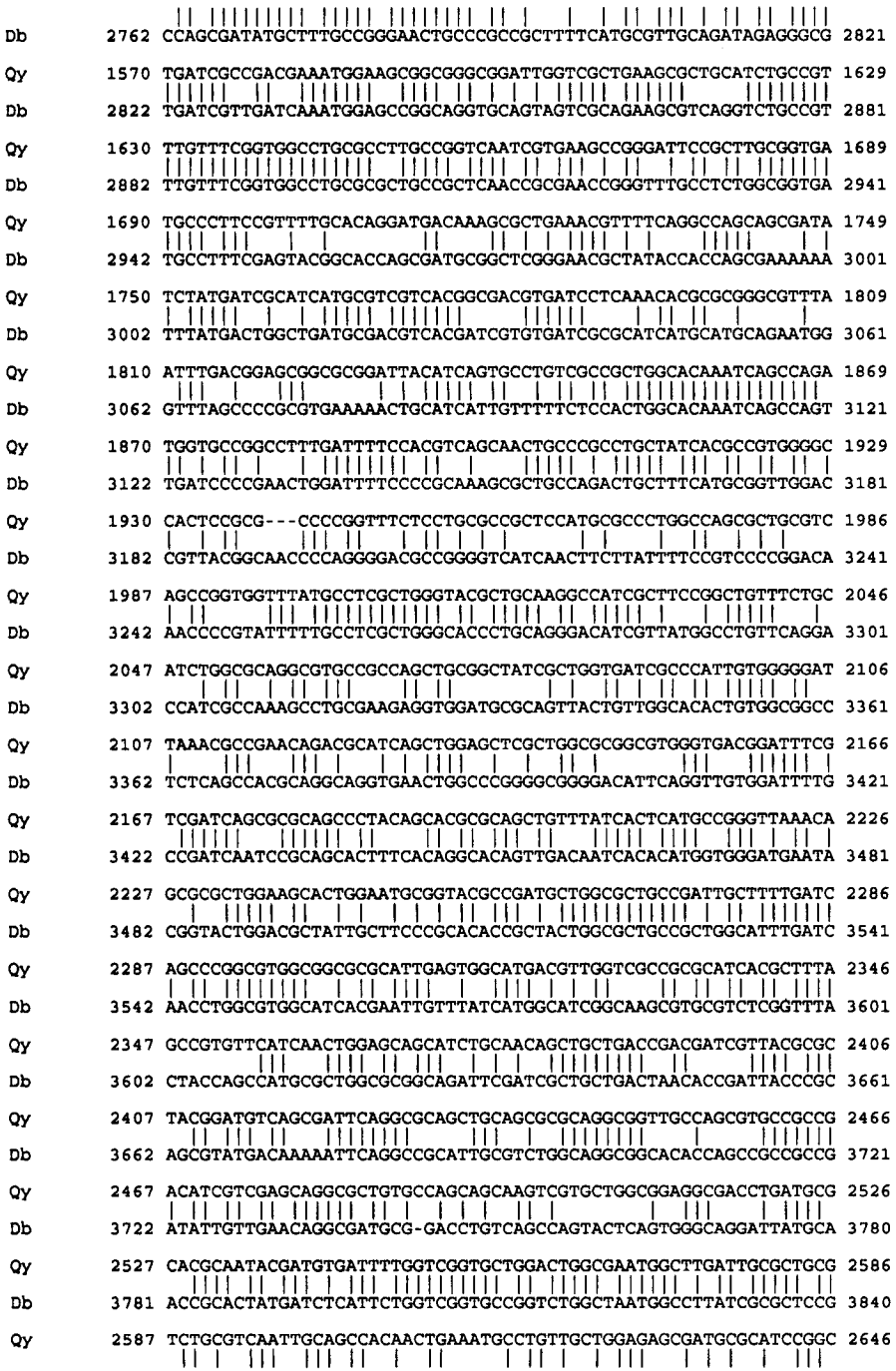
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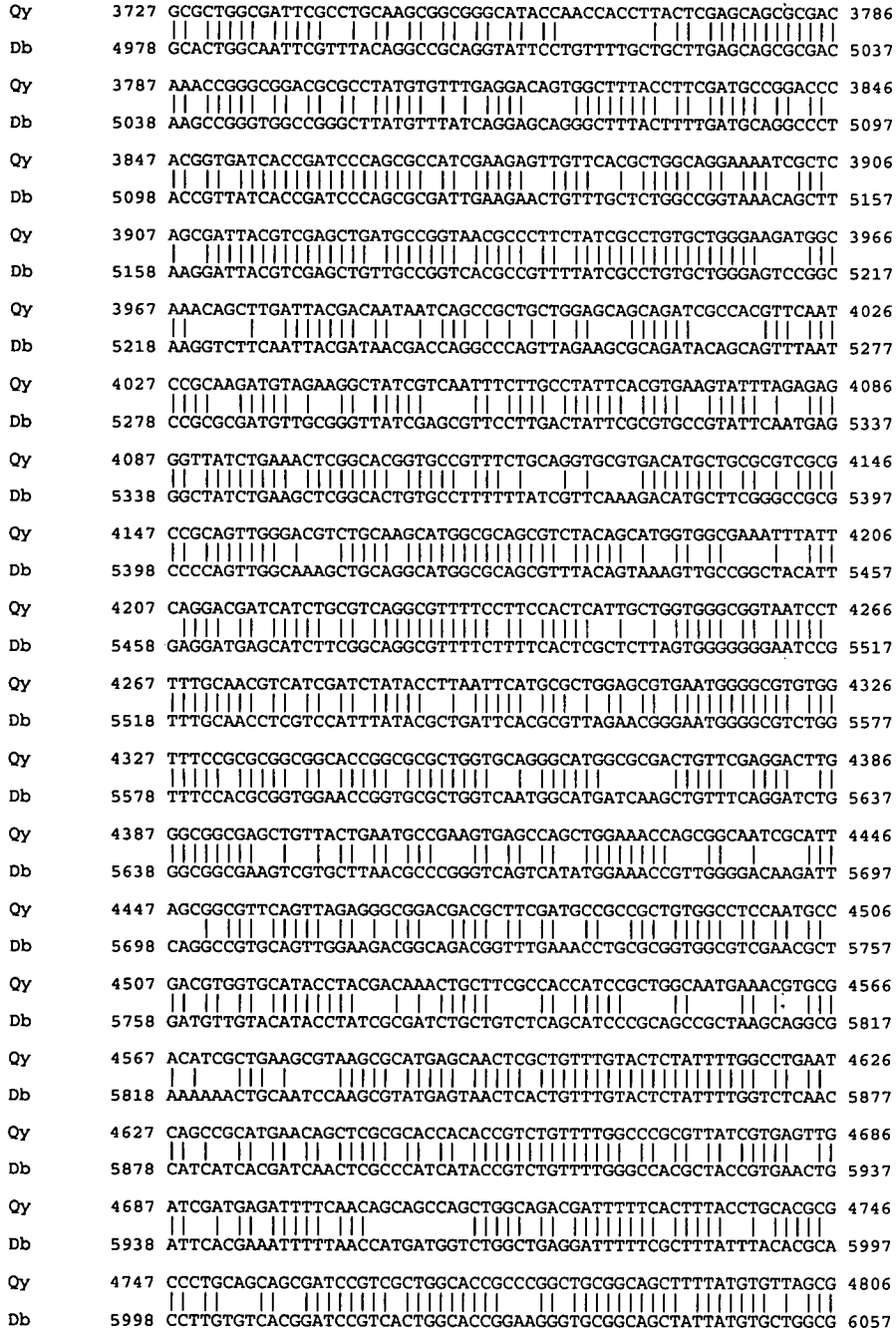
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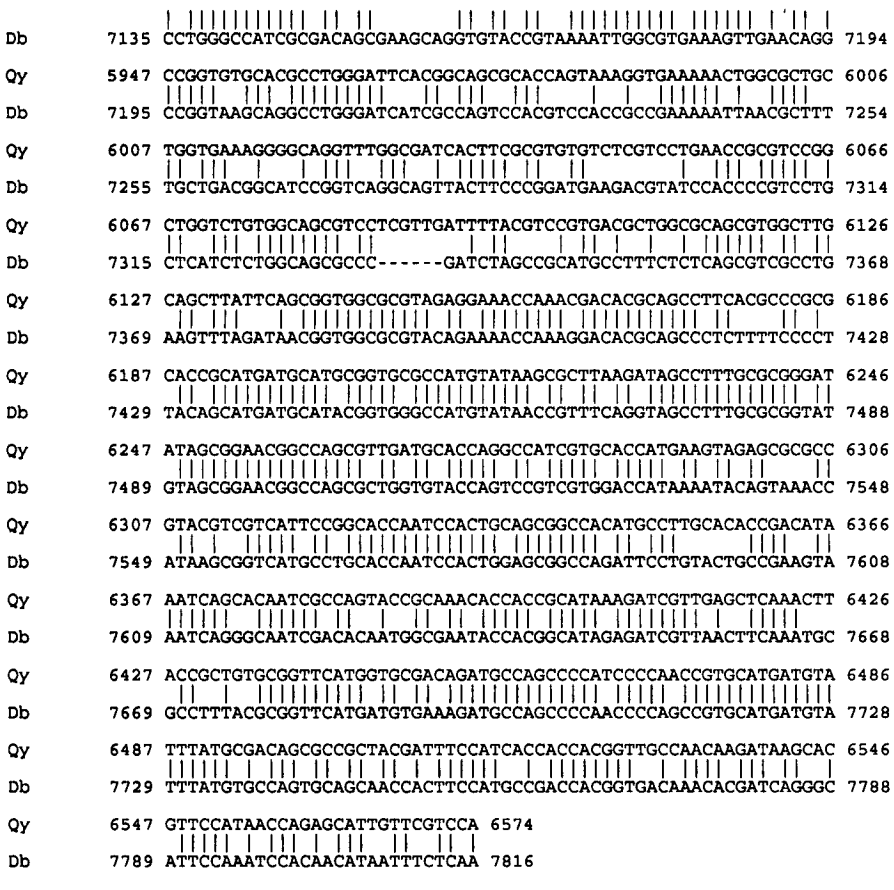

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; APPLICANT: Suh, Wonchul
; APPLICANT: Rouviere, Pierre
; TITLE OF INVENTION: PARALLEL CHROMOSOMAL STACKING OF TRAITS IN BACTERIA
; FILE REFERENCE: CL2026 US NA
; CURRENT APPLICATION NUMBER: US/10/734,778
; CURRENT FILING DATE: 2003-12-12
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; PRIOR FILING DATE: 2002-12-19
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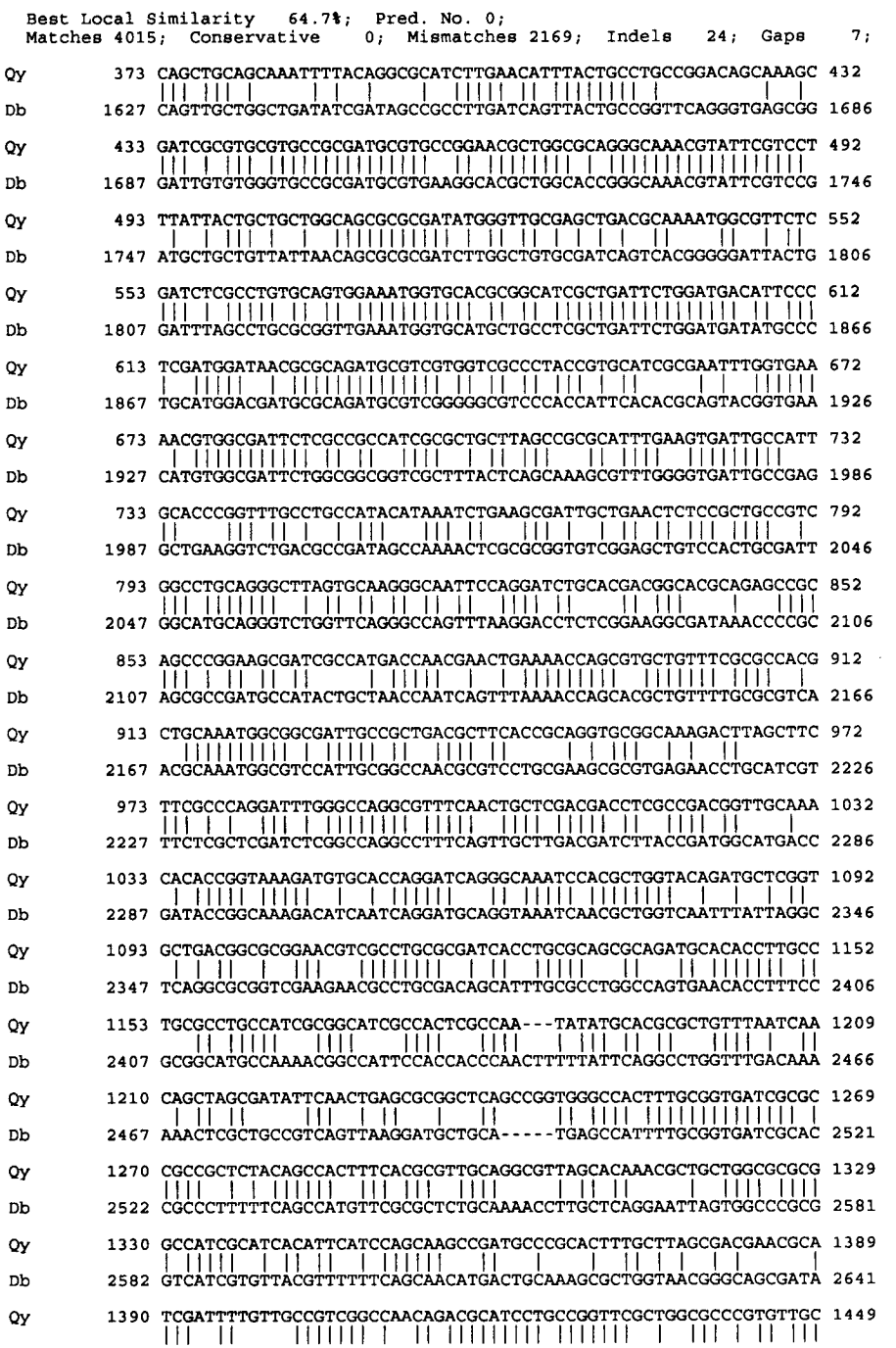

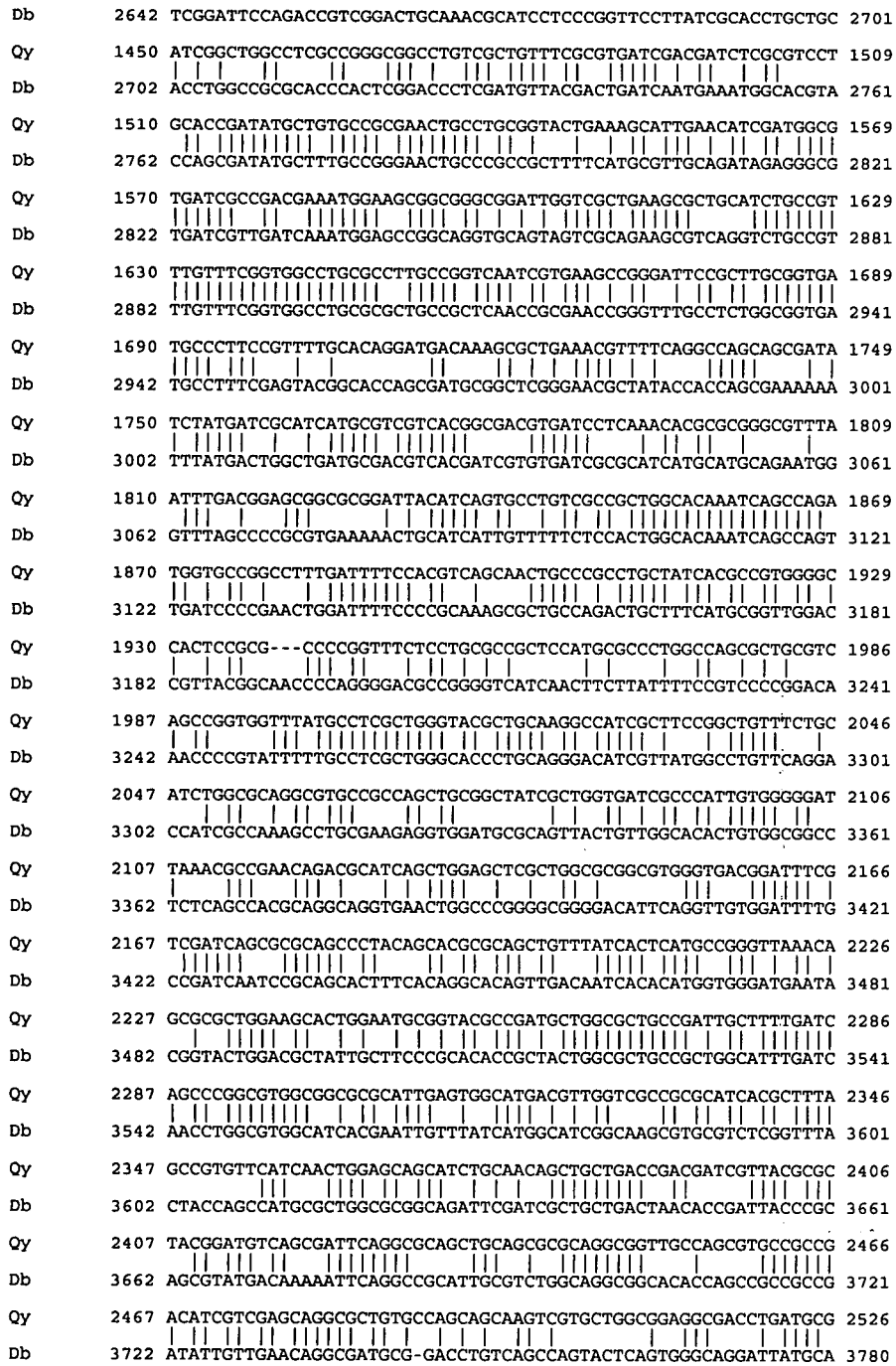
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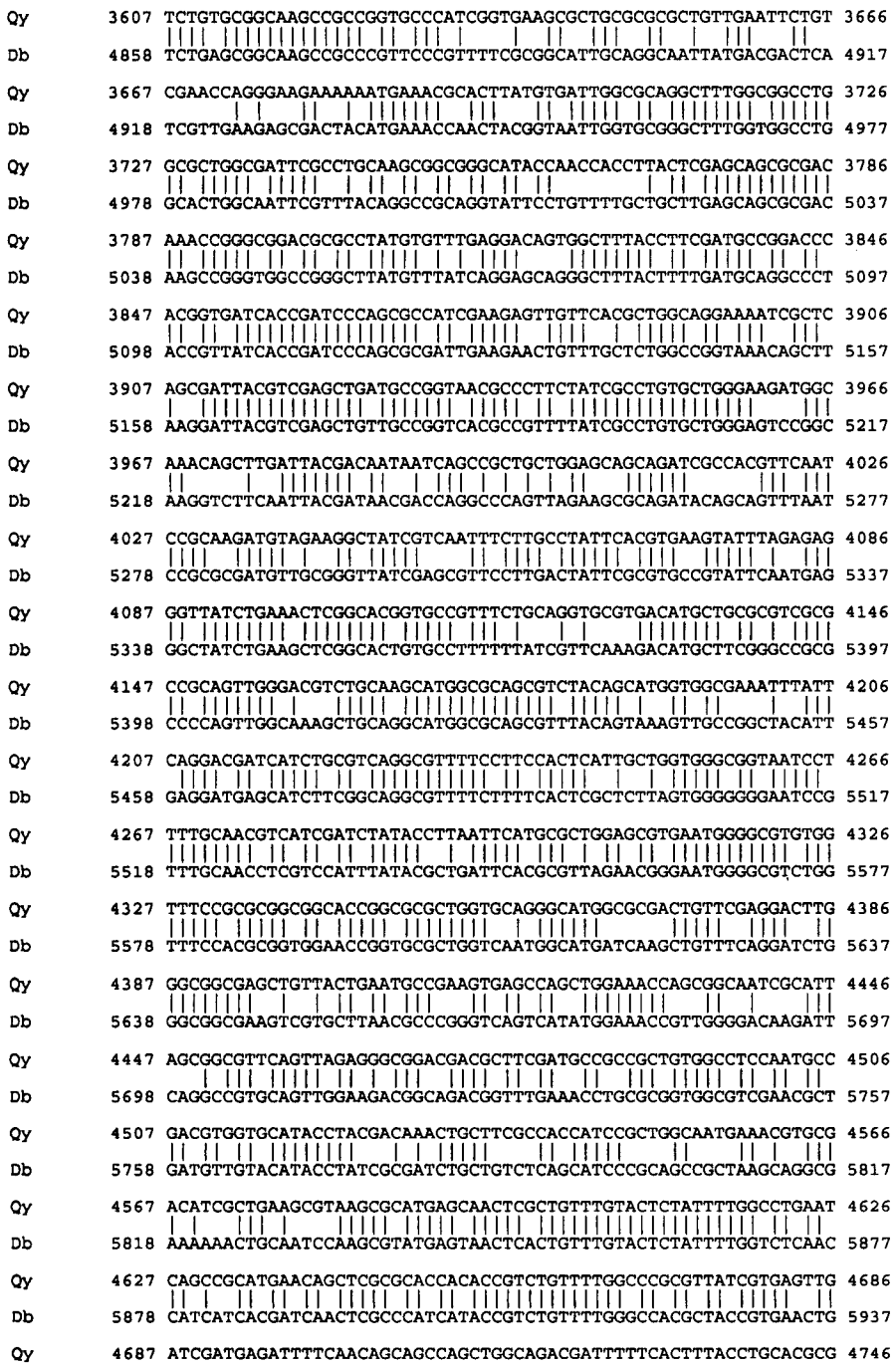
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Qy 4927 ACACACAGAATGTTTACGCCGTTTGATTTTCGCGACACGCTGCATGCCCATCACGGCTCG 4986
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Qy 4987 GCGTTTTCGCTGGAGCCGATTTTGACGCAAAGCGCCTGGTTCCGCCCGCATAACCGCGAT 5046
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Db 6298 AAGCACATTGATAATCTTTATCTGGTTGGCGCAGGCACCCATCCTGGCGCGGGCATTCCC 6357
Qy 5107 GGCGTGATCGGTTCGGCCAAGGCCACCGCCAGGCTGATGCTGGAGGATCGCGCCGAATGA 5166
Db 6358 GGCGTAATCGGCTCGGCGAAGGCGACGGCAGGCTTAATGCTGGAGGACCTGATTTGACGA 6417
Qy 5167 ATCGACAGCCTTTACTTGAGCAAGTAACGCAAACCATGGCGGTGGGCTCGAAGAGTTTCG 5226
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Qy 5587 TCGGTTTGATGATGGCGCGCGTAATGGGCGTGCGCGACGAAGCGGTGCTCGATCACGCCT 5646
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RESULT 6
US-10-734-936-37
; Sequence 37, Application US/10734936
; Publication No. US20040209370A1
; GENERAL INFORMATION:
;  APPLICANT: E.I. duPont de Nemours and Co., Inc.
;  APPLICANT:  Suh, Wonchul
;  TITLE OF INVENTION: Method for Chromosomal Engineering
;  FILE REFERENCE: CL1878 US NA
;  CURRENT APPLICATION NUMBER: US/10/734,936
;  CURRENT FILING DATE:  2003-12-12
;  PRIOR APPLICATION NUMBER: US 60/434602
;  PRIOR FILING DATE: 2002-12-19
;  NUMBER OF SEQ ID NOS: 37
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 37
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;   TYPE: DNA
;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: Plasmid pPCB15
US-10-734-936-37

  Query Match             37.4%;  Score 2619.6;  DB 8;  Length 8609;
  Best Local Similarity   64.7%;  Pred. No. 0;
  Matches 4015;  Conservative    0;  Mismatches 2169;  Indels   24;  Gaps    7;

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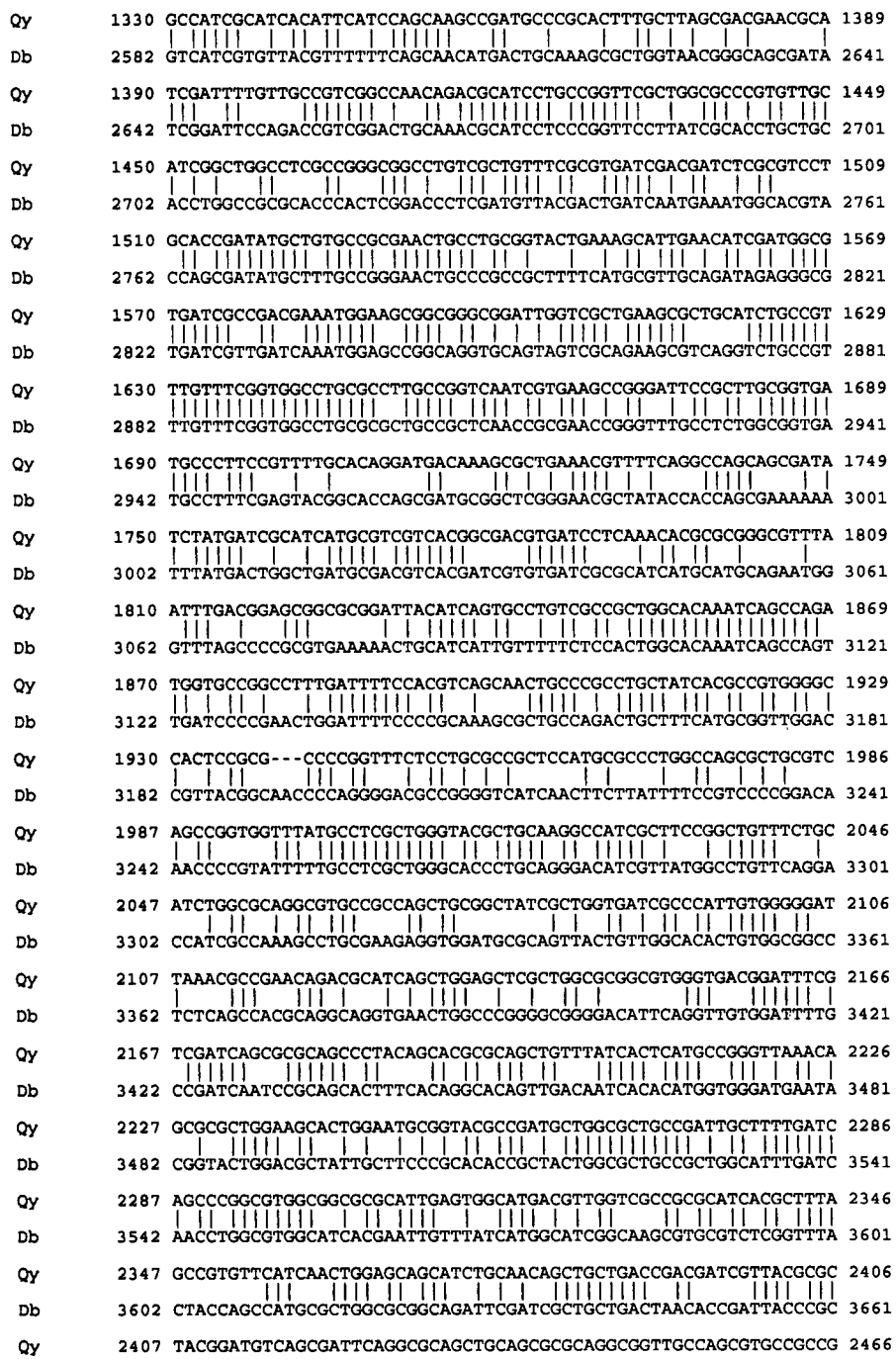
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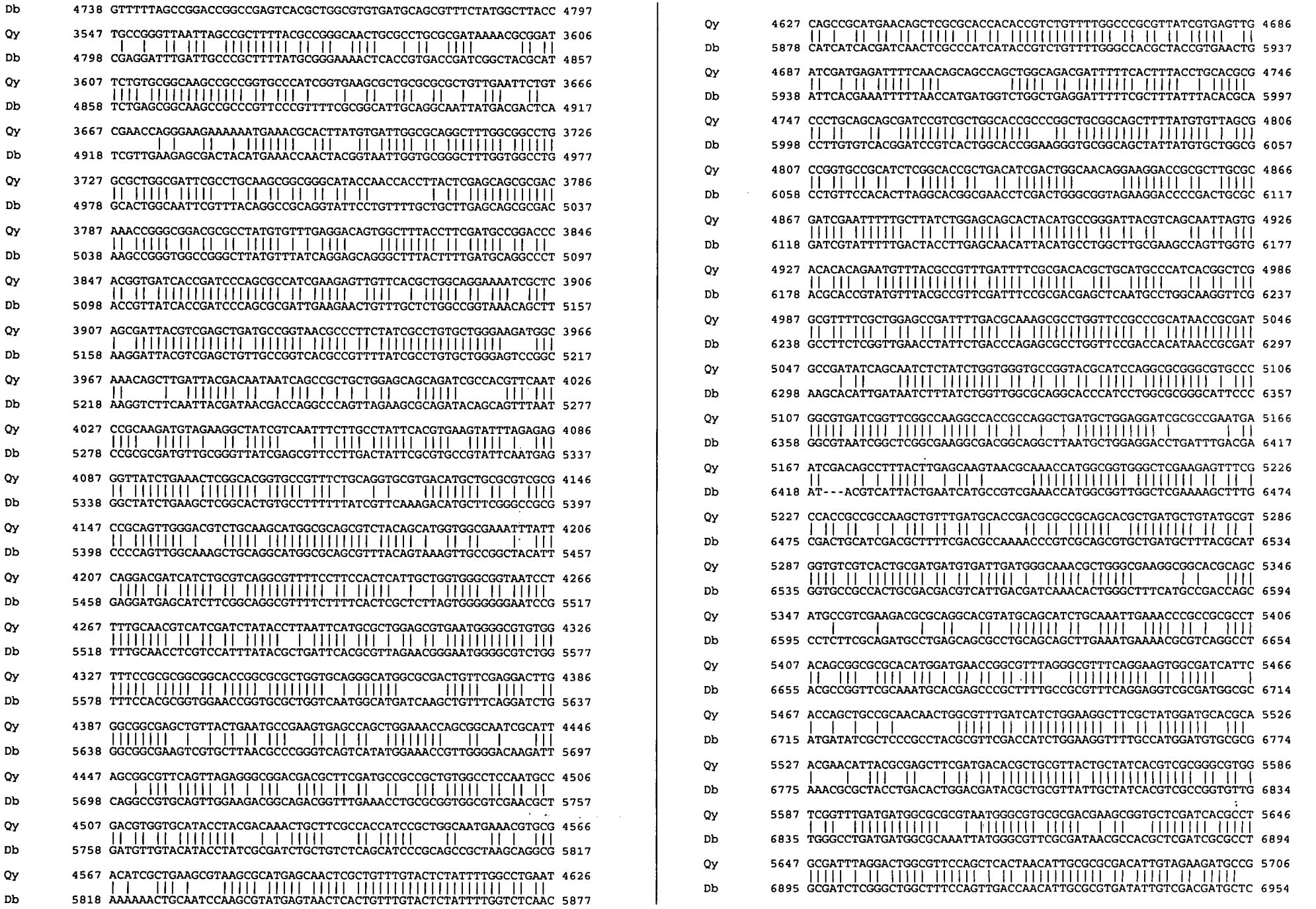

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Db       7015 ATTATGCTGCGCCAGAAAACCGGCAGGCCTTAAGCCGTATCGCCGGGCGACTGGTACGGG 7074

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RESULT 7
US-10-735-442-64
; Sequence 64, Application US/10735442
; Publication No. US20040219629A1
; GENERAL INFORMATION:
;  APPLICANT: E. I. duPont de Nemours and Company, Inc.
;  APPLICANT:  Suh, Wonchul
;  APPLICANT:  Rouviere, Pierre
;  APPLICANT:  Cheng, Qiong
;  TITLE OF INVENTION: Increasing Carotenoid Production in Bacteria Via Chromosomal
;  TITLE OF INVENTION:  Integration
;  FILE REFERENCE: CL2027 US NA
;  CURRENT APPLICATION NUMBER: US/10/735,442
;  CURRENT FILING DATE:  2003-12-12
;  PRIOR APPLICATION NUMBER: US 60/434618
;  PRIOR FILING DATE: 2002-12-19
;  NUMBER OF SEQ ID NOS: 66
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 64
;   LENGTH: 8609
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;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: Plasmid pPCB15
US-10-735-442-64

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  Matches 4015;  Conservative    0;  Mismatches 2169;  Indels   24;  Gaps    7;

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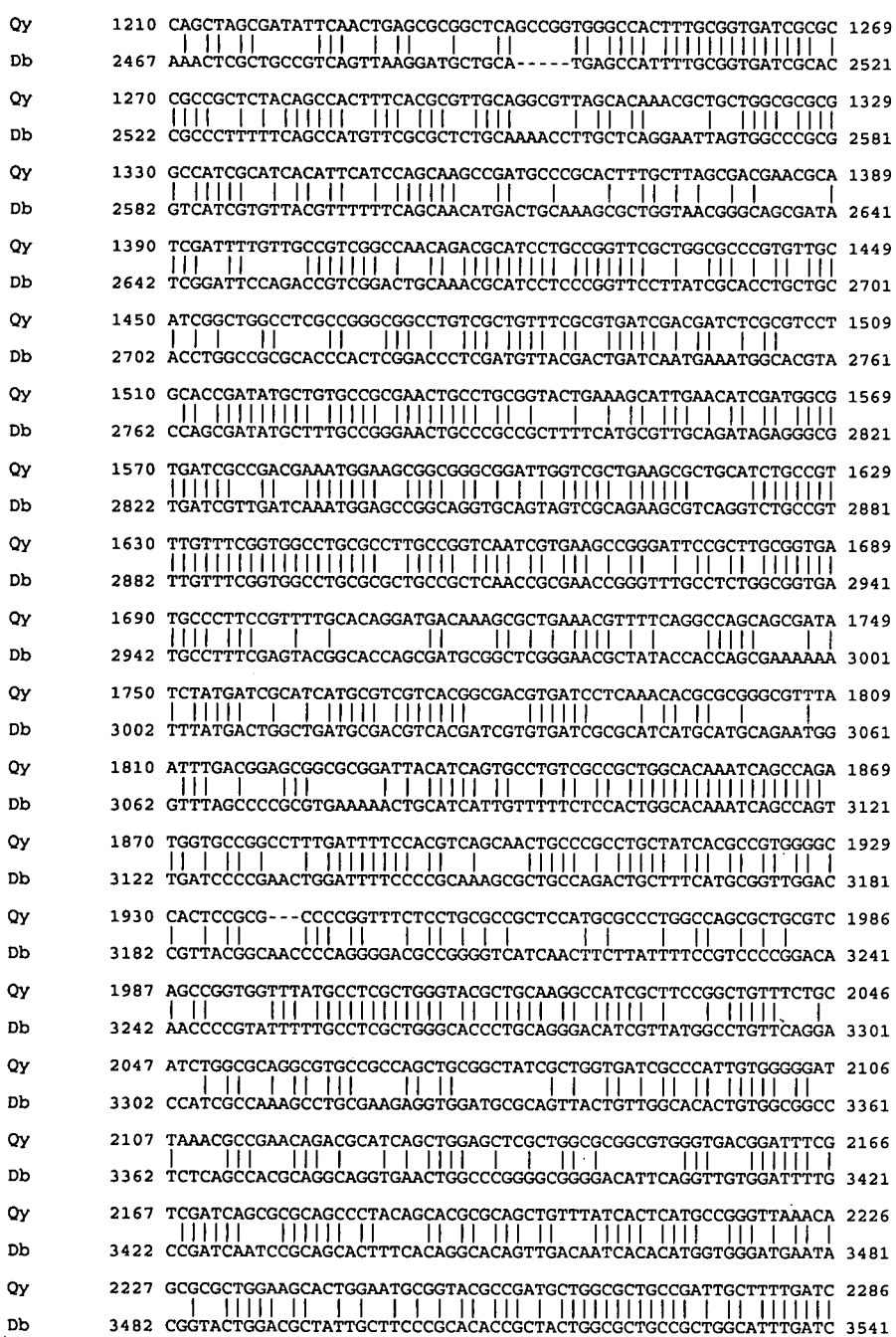
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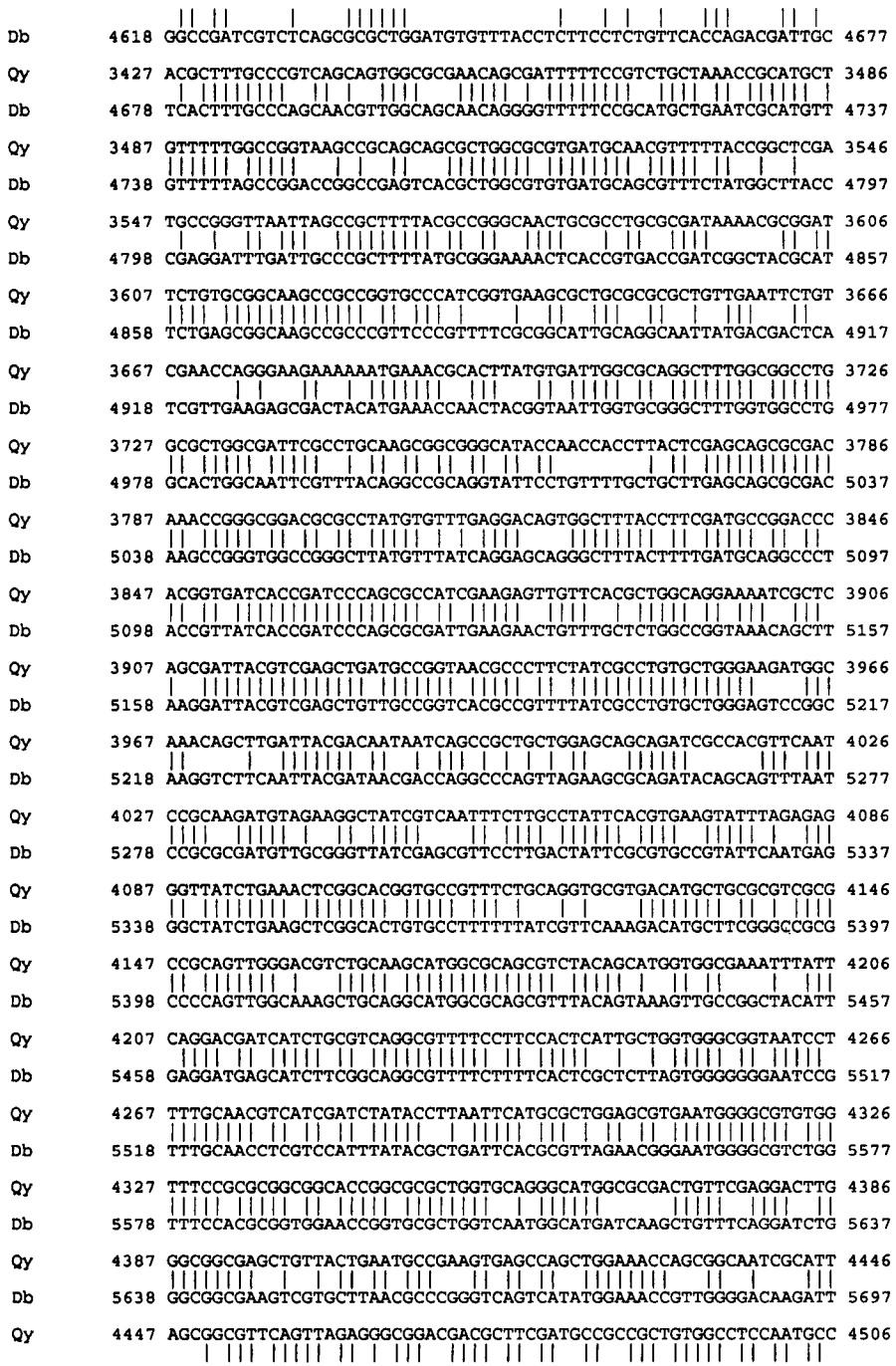
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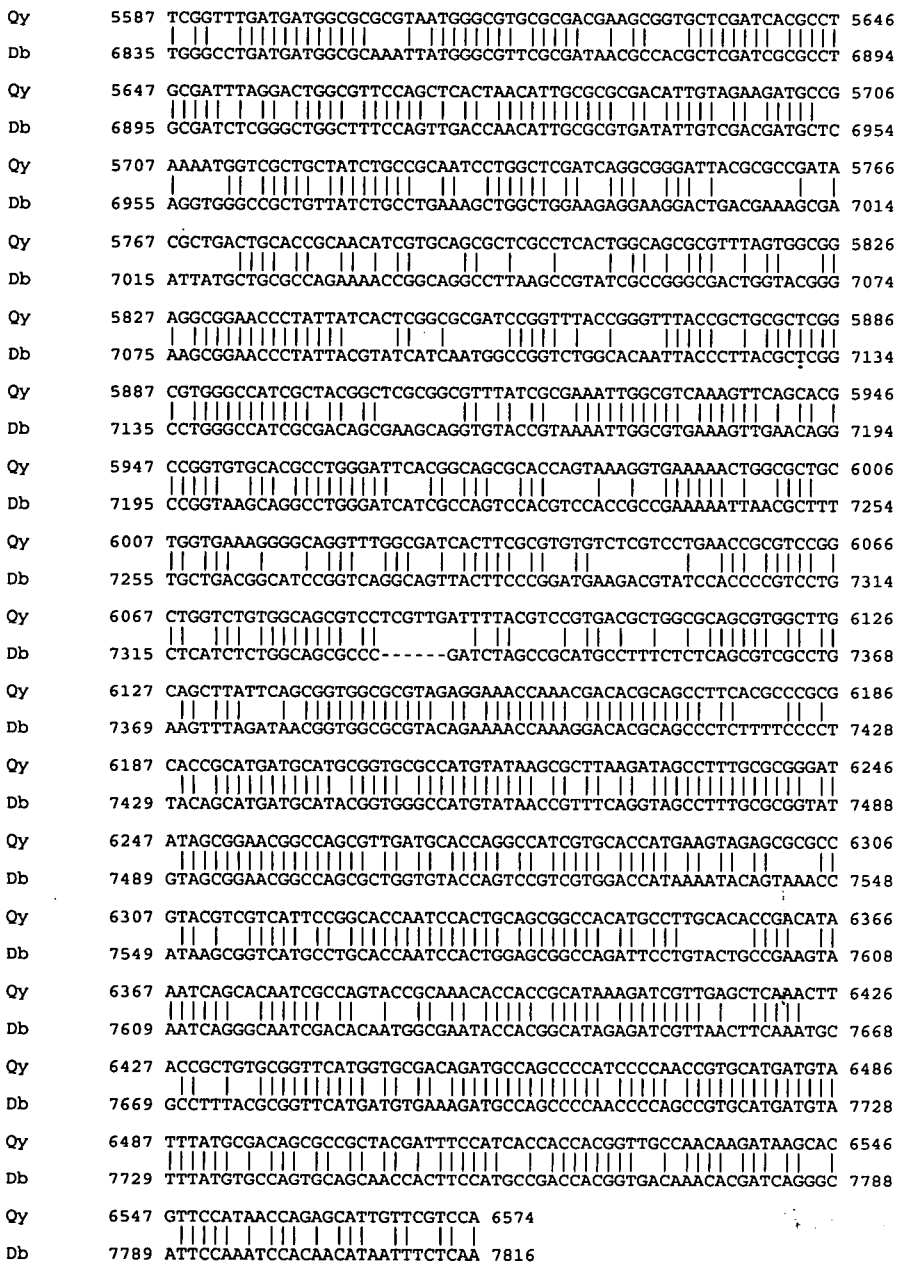

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; Sequence 54, Application US/10886906

; Publication No. US20050019852A1
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; APPLICANT: Rouviere, Pierre
; APPLICANT: Cheng, Qiong
; APPLICANT: Tao, Luan
; TITLE OF INVENTION: Production of Aromatic Carotenoids in Gram Negative Bacteria
; FILE REFERENCE: CL2128 US NA
; CURRENT APPLICATION NUMBER: US/10/886,906
; CURRENT FILING DATE: 2004-07-08
; PRIOR APPLICATION NUMBER: US 60/486,106
; PRIOR FILING DATE: 2003-07-10
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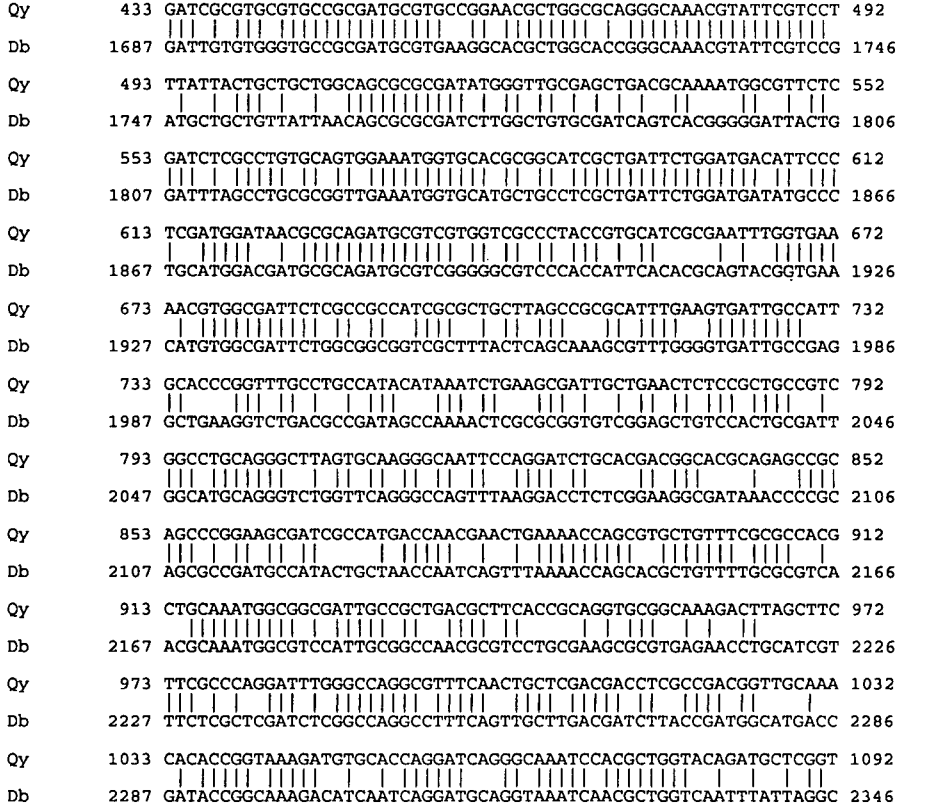

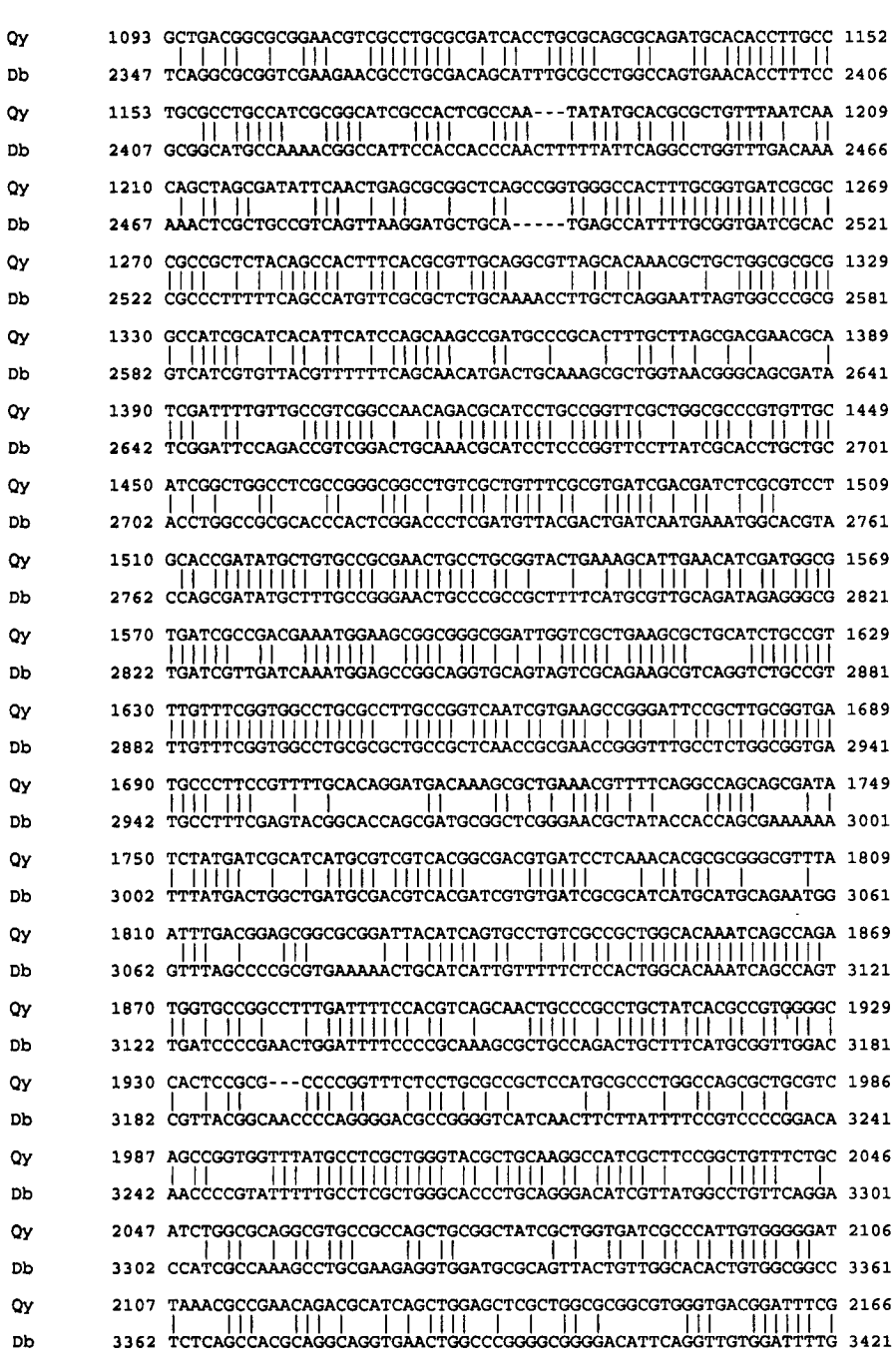
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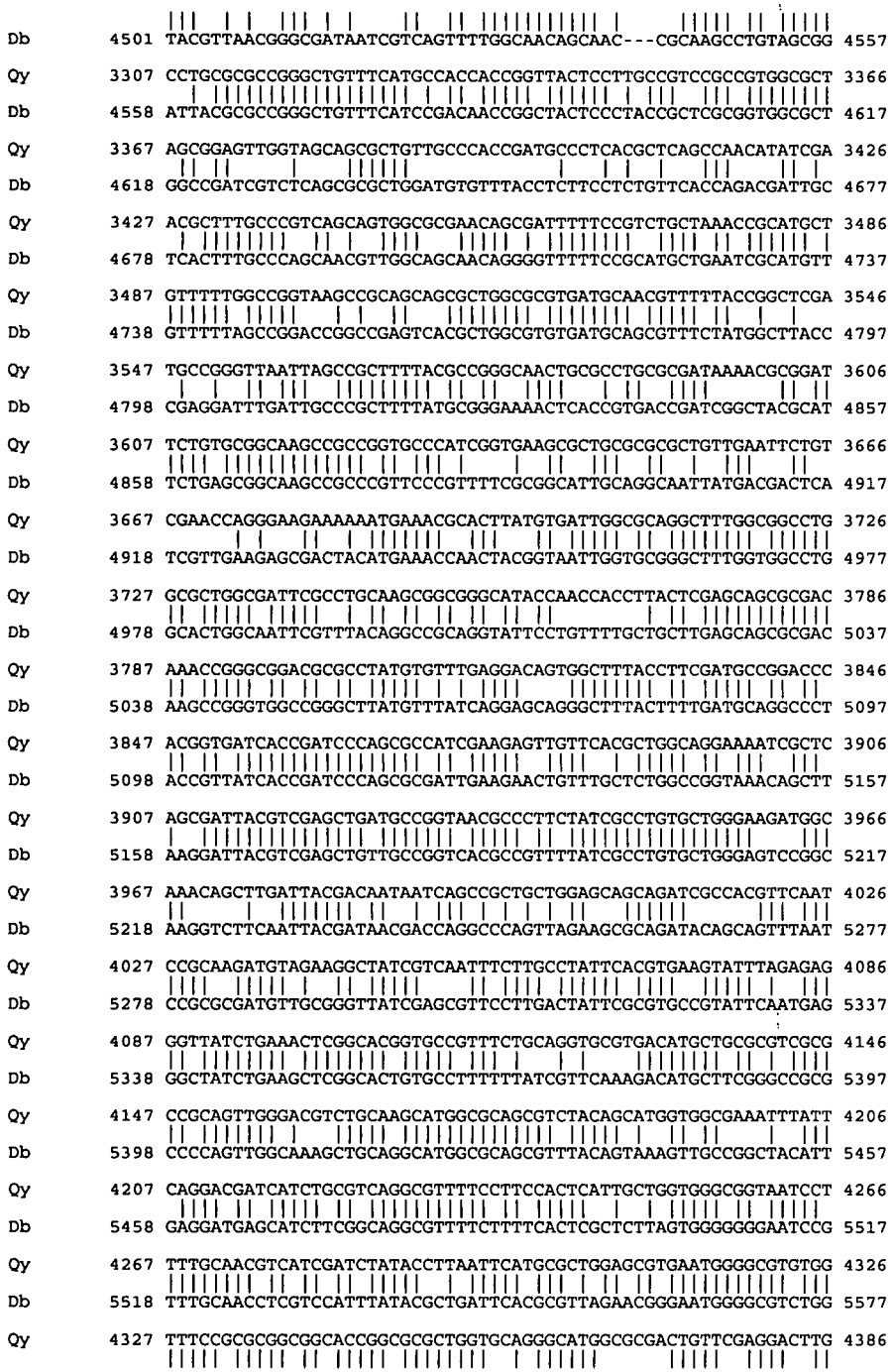
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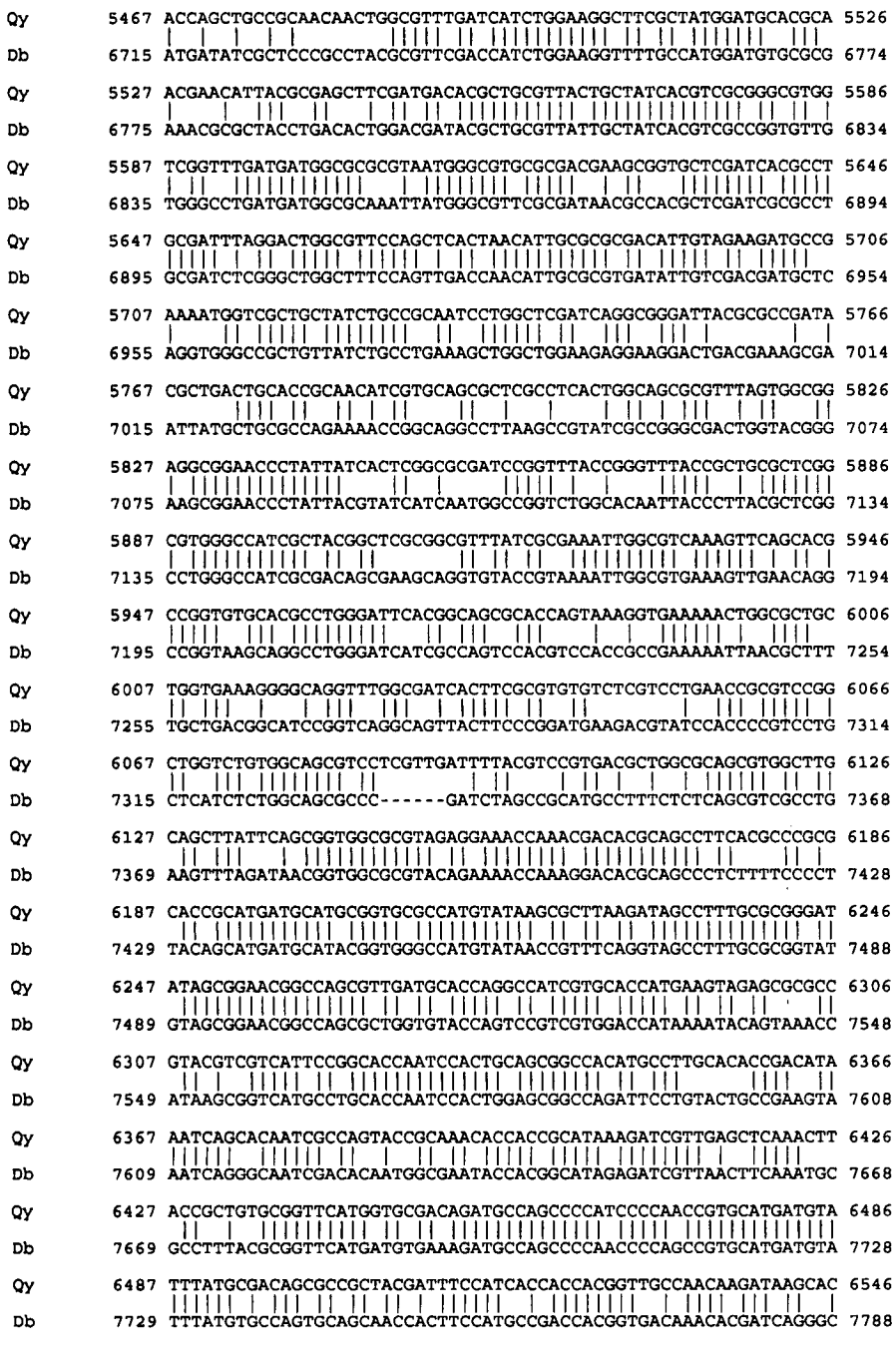

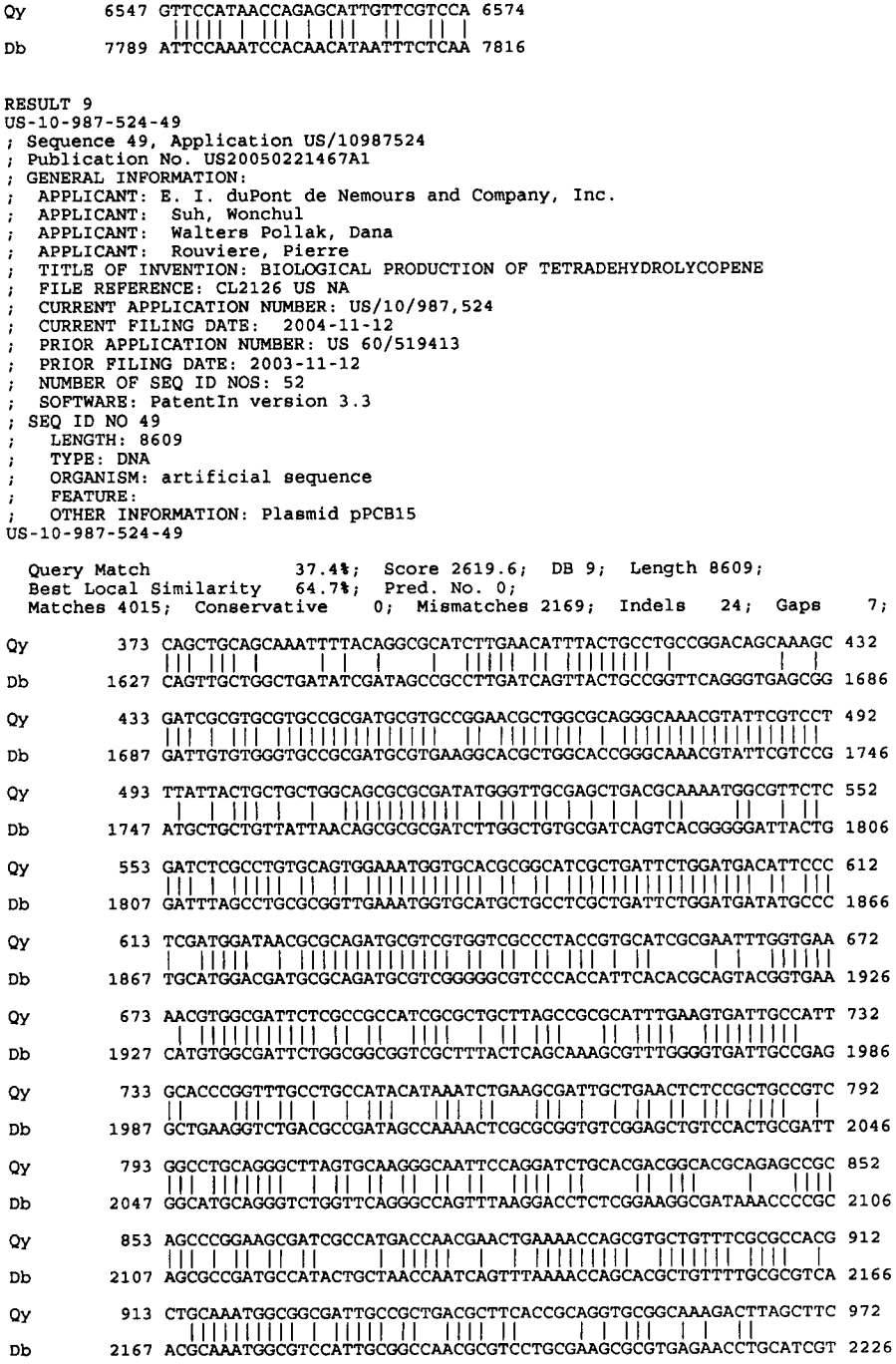

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; APPLICANT: E. I. duPont de Nemours and Company, Inc.
; APPLICANT: Suh, Wonchul
; APPLICANT: Walters Pollak, Dana
; APPLICANT: Rouviere, Pierre
; TITLE OF INVENTION: BIOLOGICAL PRODUCTION OF TETRADEHYDROLYCOPENE
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; CURRENT FILING DATE: 2004-11-12
; PRIOR APPLICATION NUMBER: US 60/519413
; PRIOR FILING DATE: 2003-11-12
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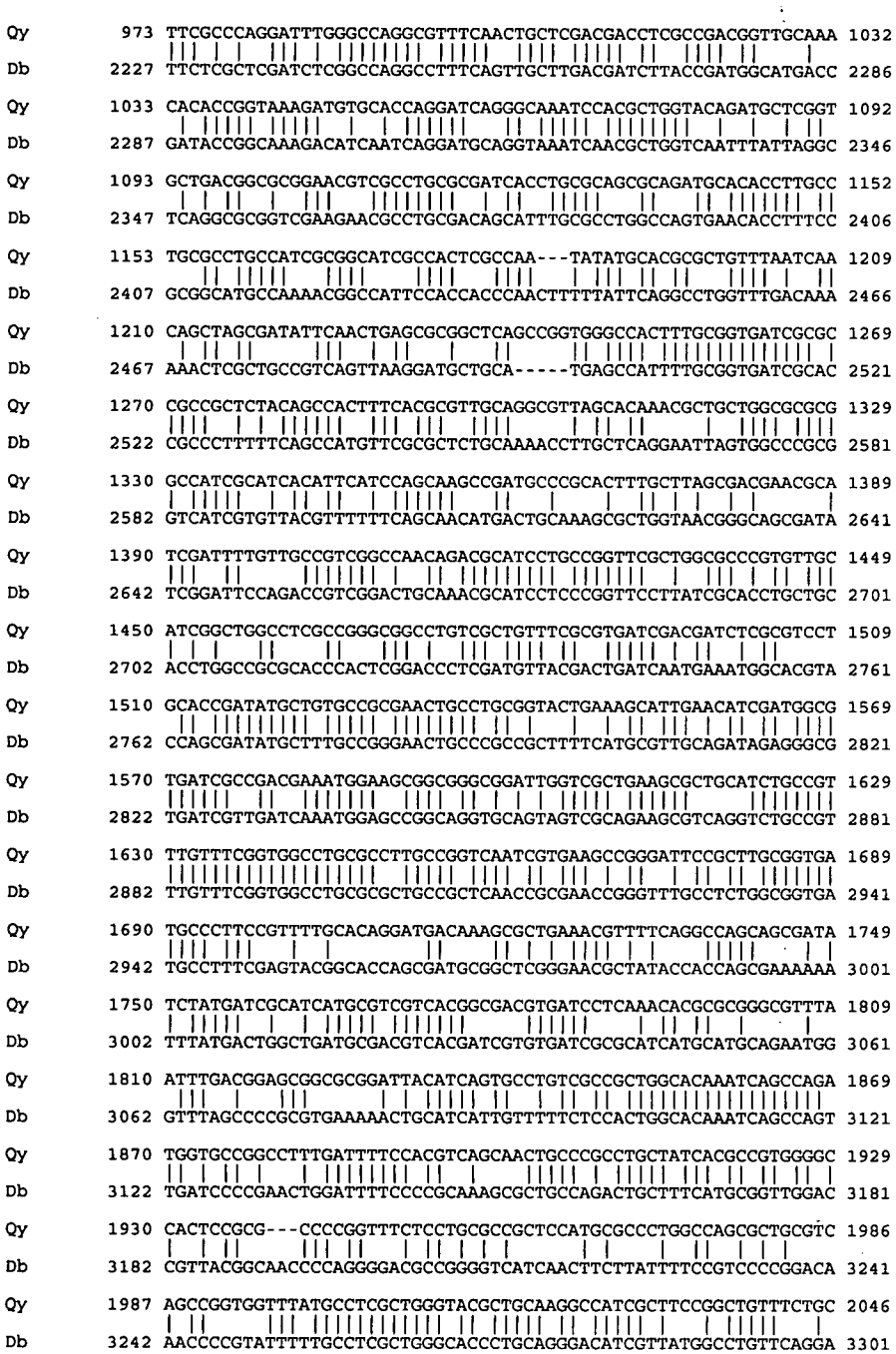
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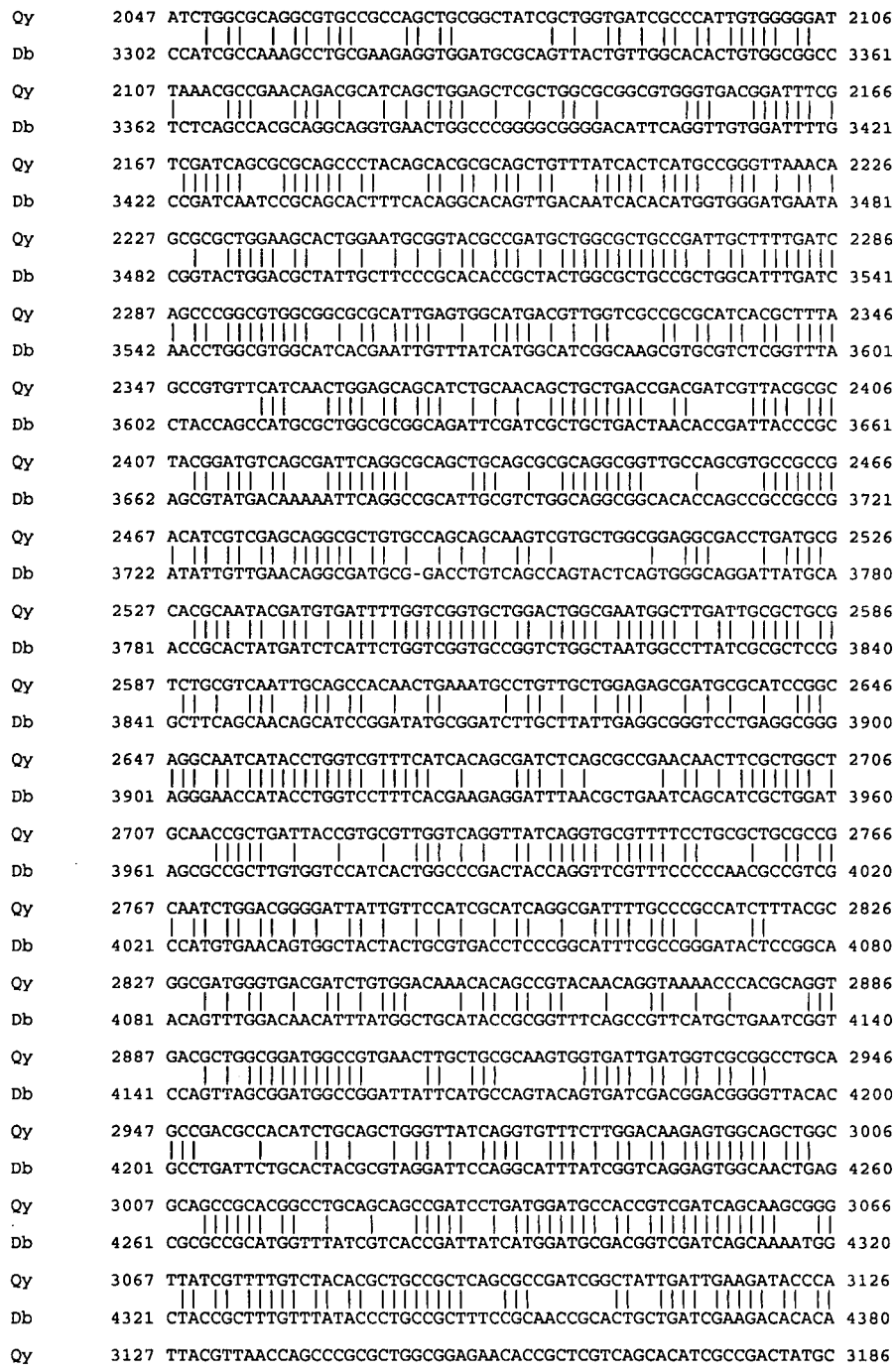
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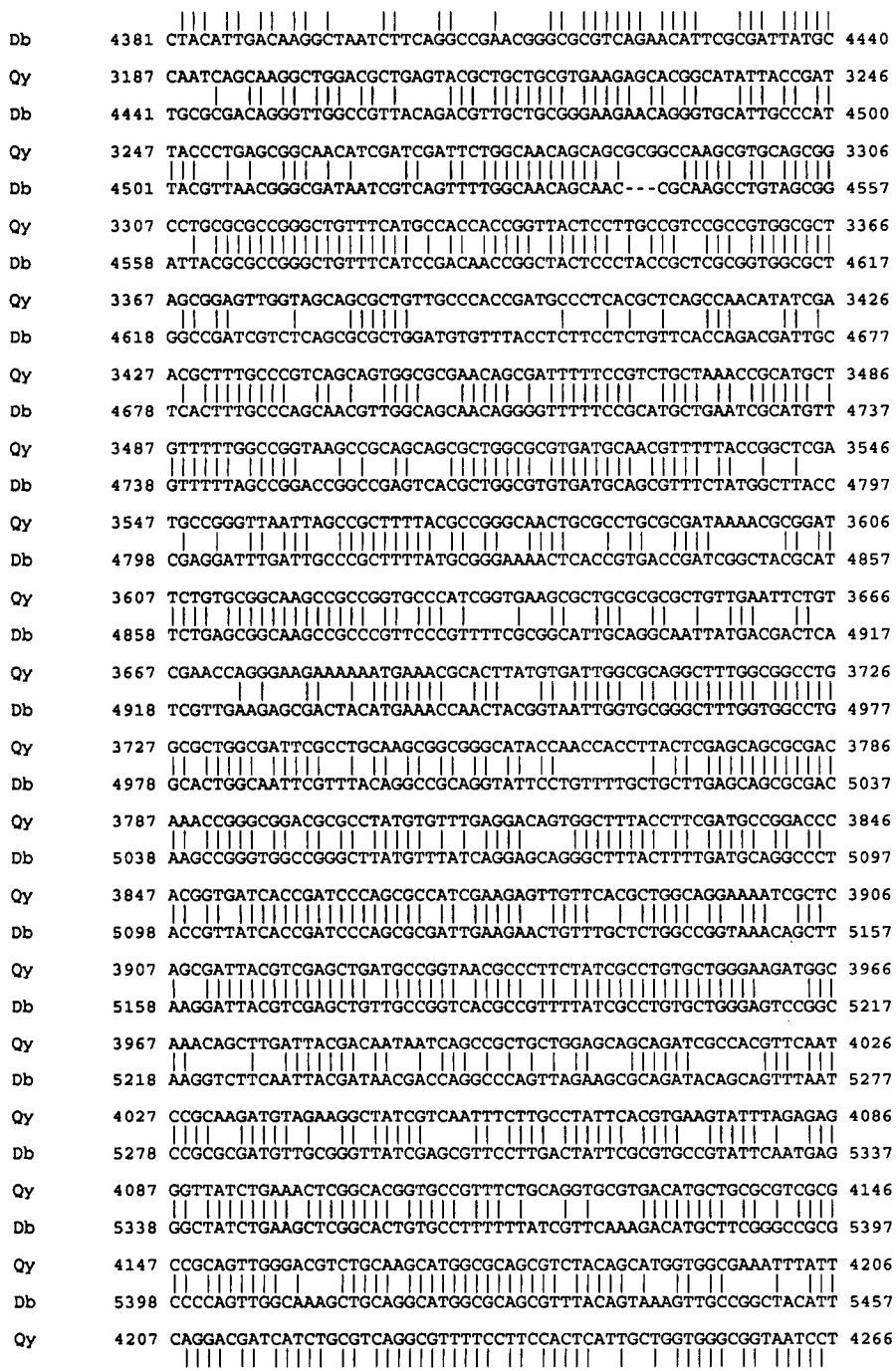
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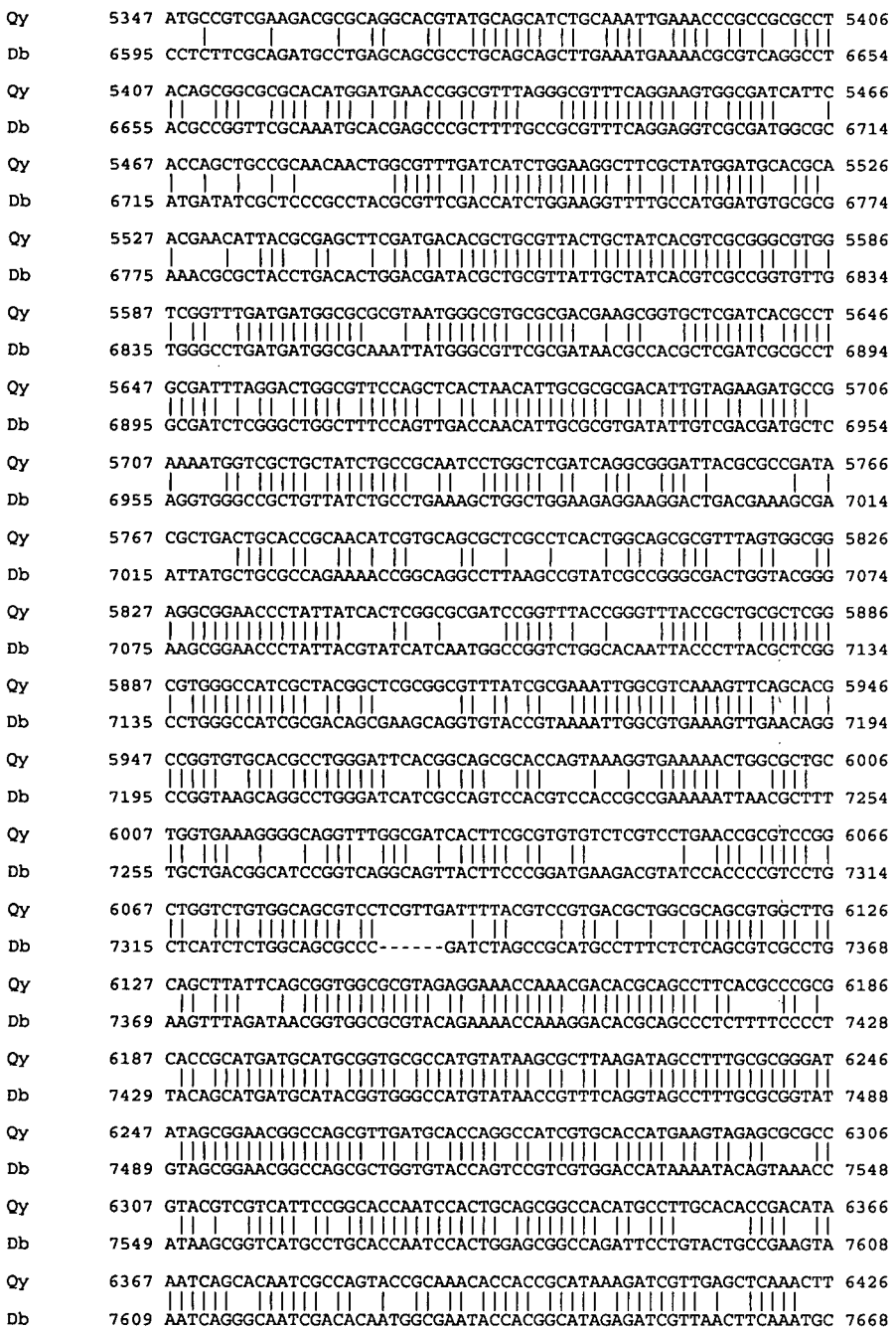
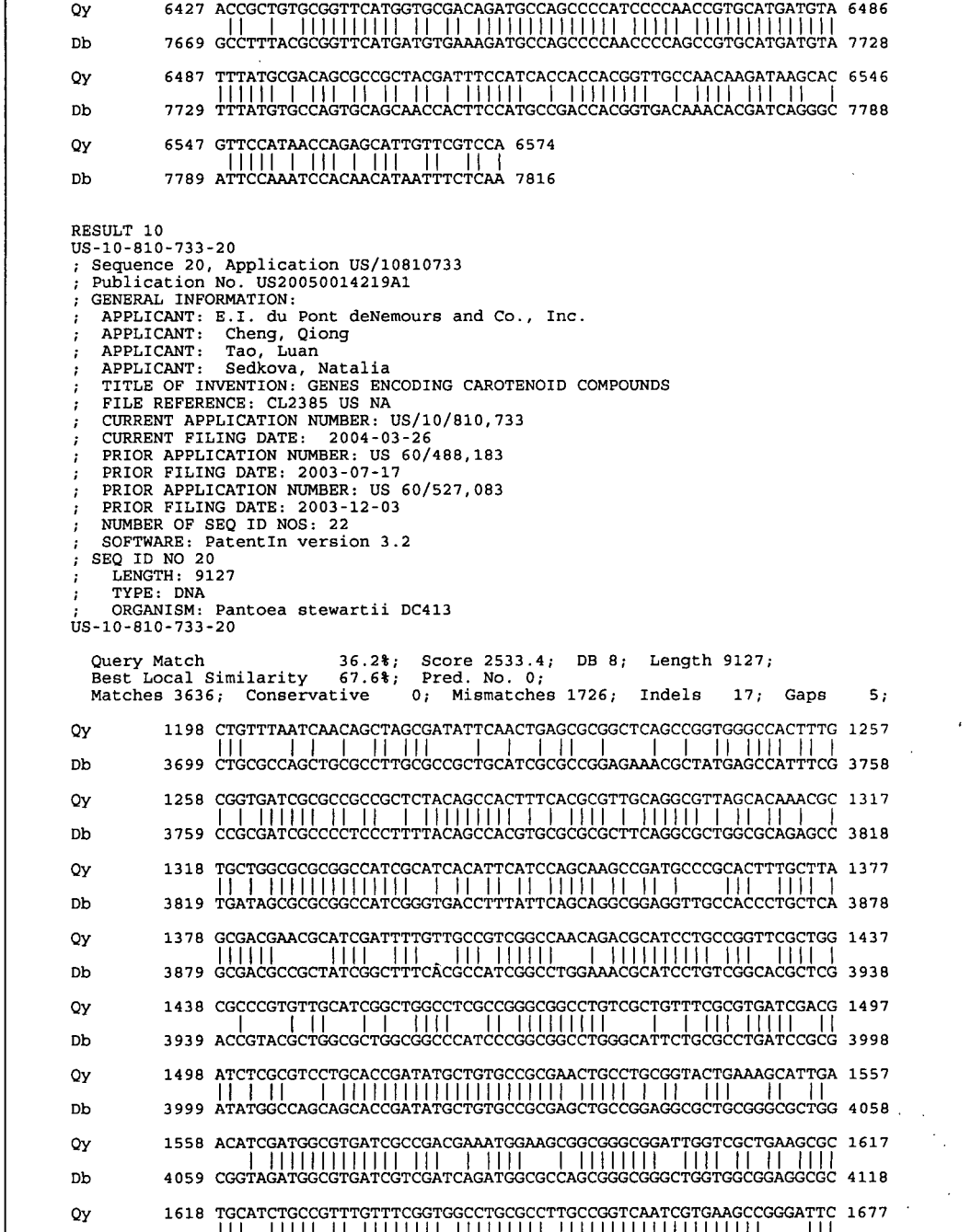
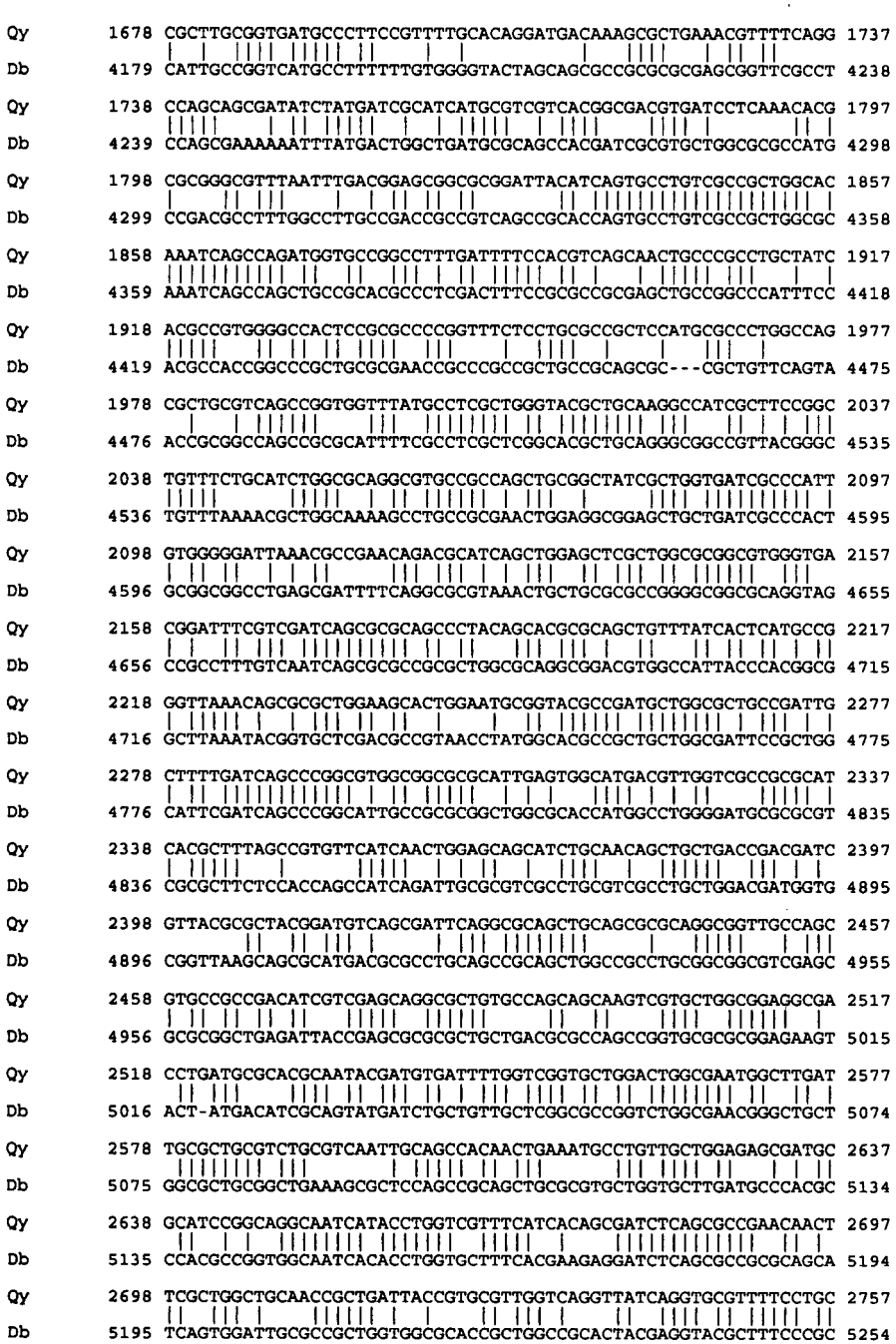
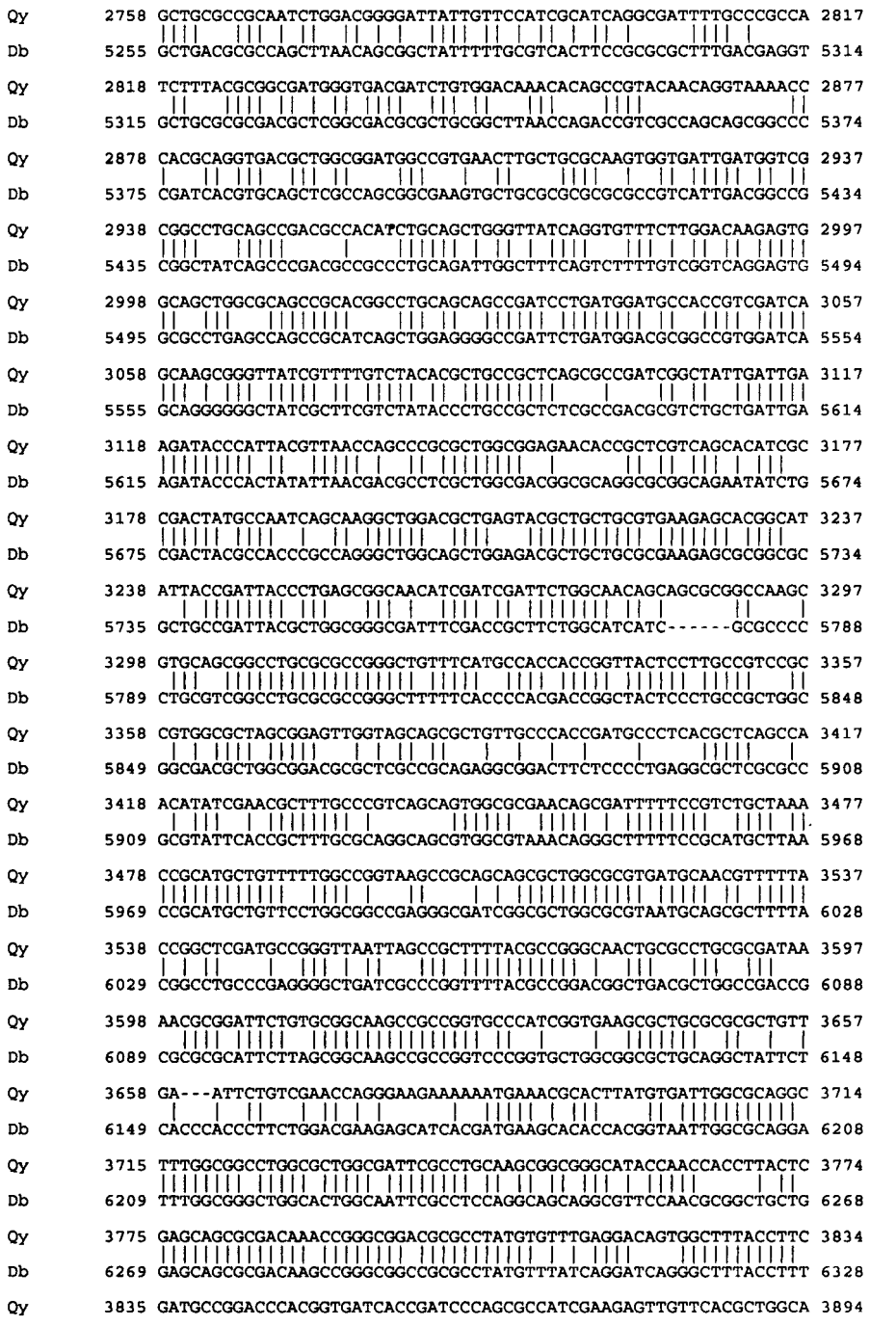


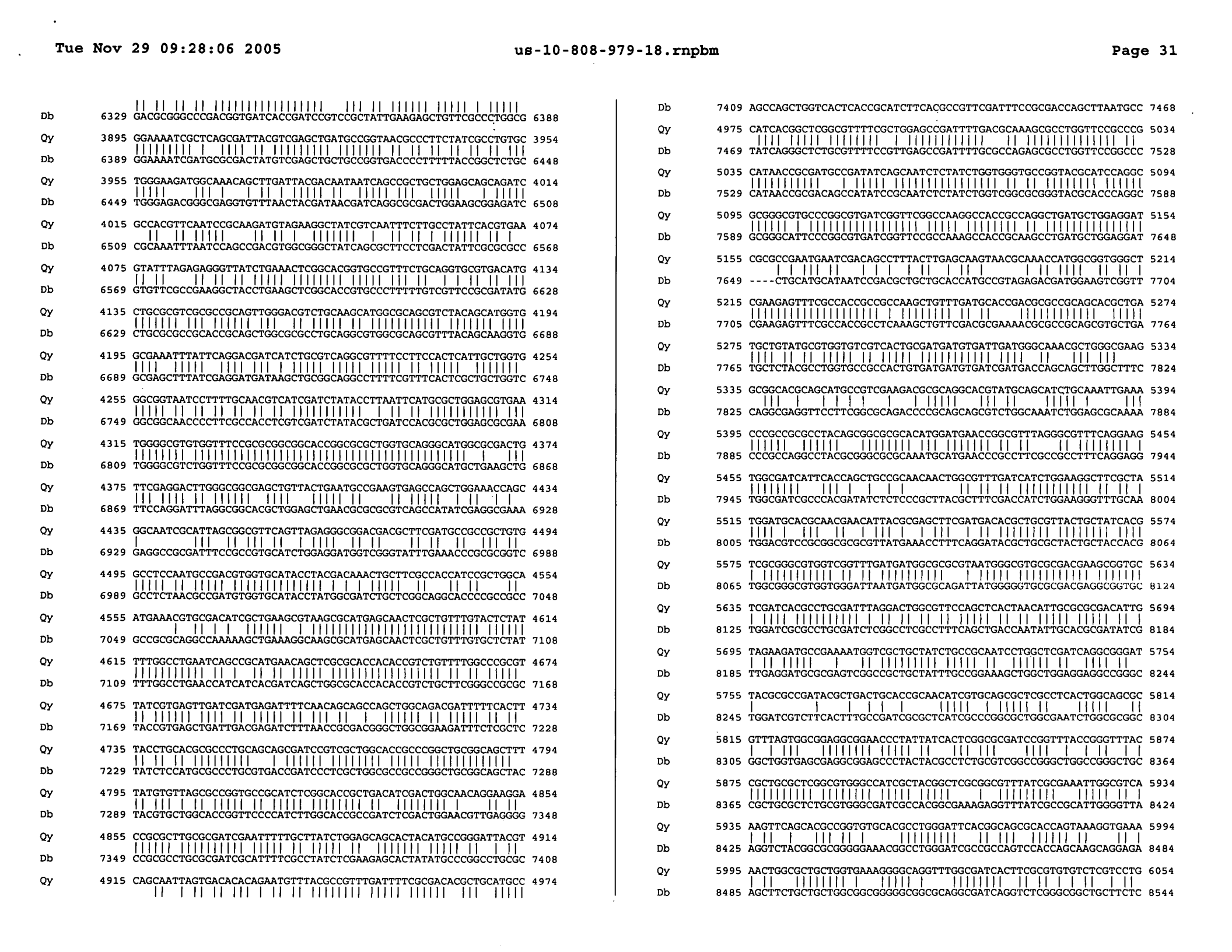


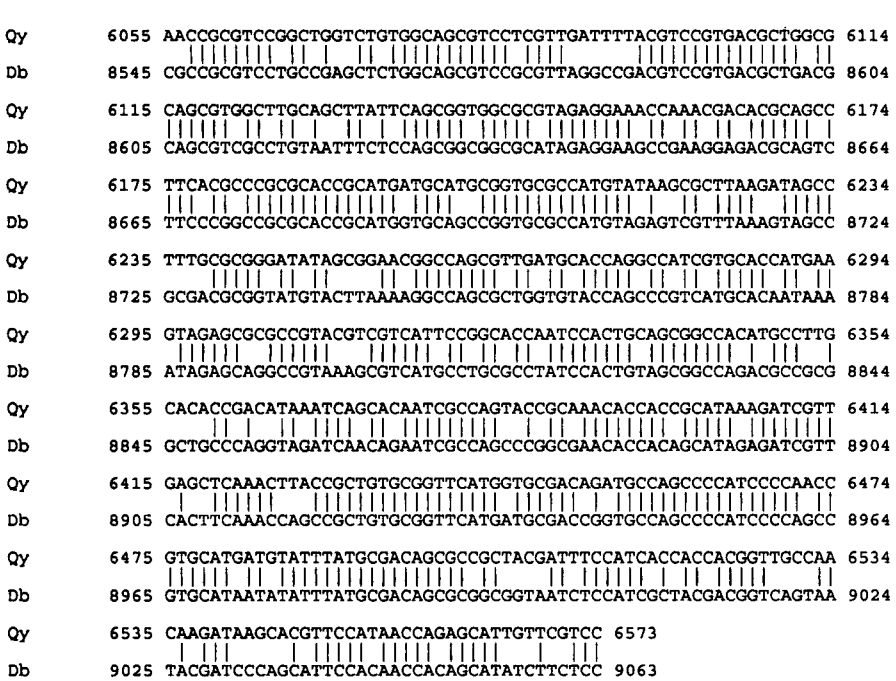
RESULT 10
US-10-810-733-20
; Sequence 20, Application US/10810733
; Publication No. US20050014219A1
; GENERAL INFORMATION:
; APPLICANT: E.I. du Pont deNemours and Co., Inc.
; APPLICANT: Cheng, Qiong
; APPLICANT: Tao, Luan
; APPLICANT: Sedkova, Natalia
; TITLE OF INVENTION: GENES ENCODING CAROTENOID COMPOUNDS
; FILE REFERENCE: CL2385 US NA
; CURRENT APPLICATION NUMBER: US/10/810,733
; CURRENT FILING DATE: 2004-03-26
; PRIOR APPLICATION NUMBER: US 60/488,183
; PRIOR FILING DATE: 2003-07-17
; PRIOR APPLICATION NUMBER: US 60/527,083
; PRIOR FILING DATE: 2003-12-03
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 20
; LENGTH: 9127
; TYPE: DNA
; ORGANISM: Pantoea stewartii DC413
US-10-810-733-20

Query Match 36.2%; Score 2533.4; DB 8; Length 9127;
Best Local Similarity 67.6%; Pred. No. 0;
Matches 3636; Conservative 0; Mismatches 1726; Indels 17; Gaps 5;



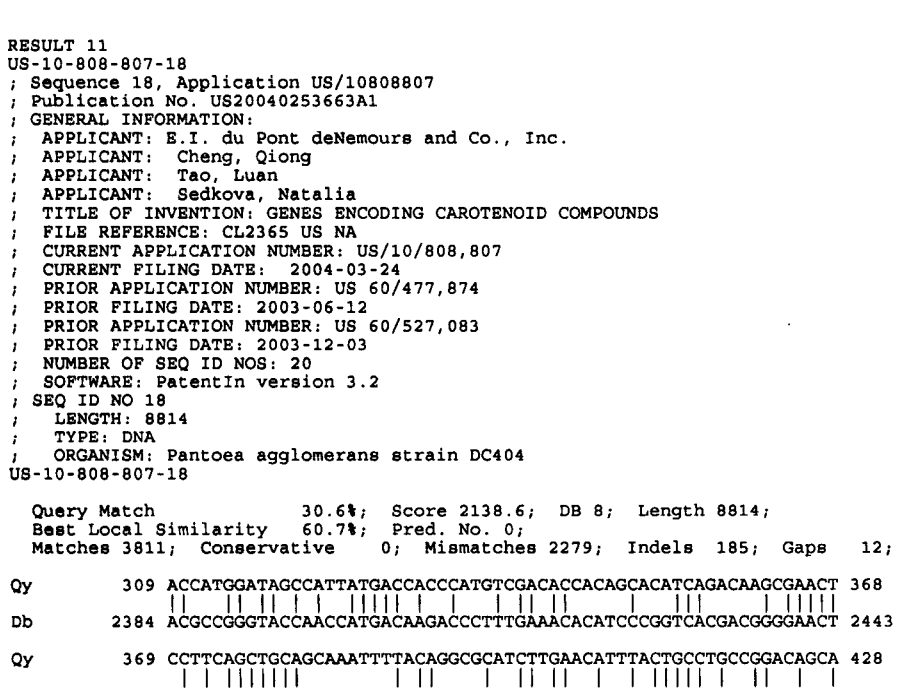


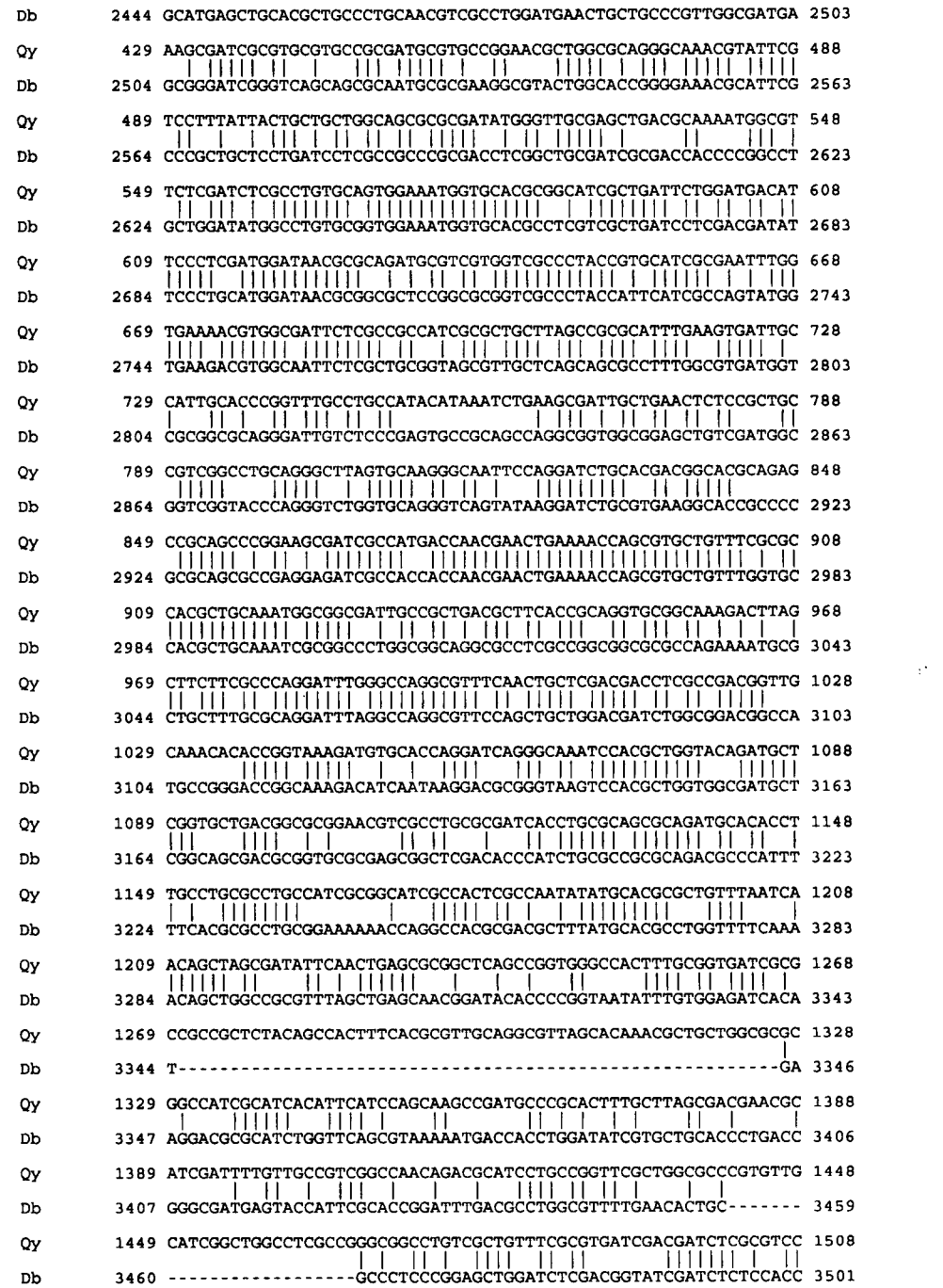


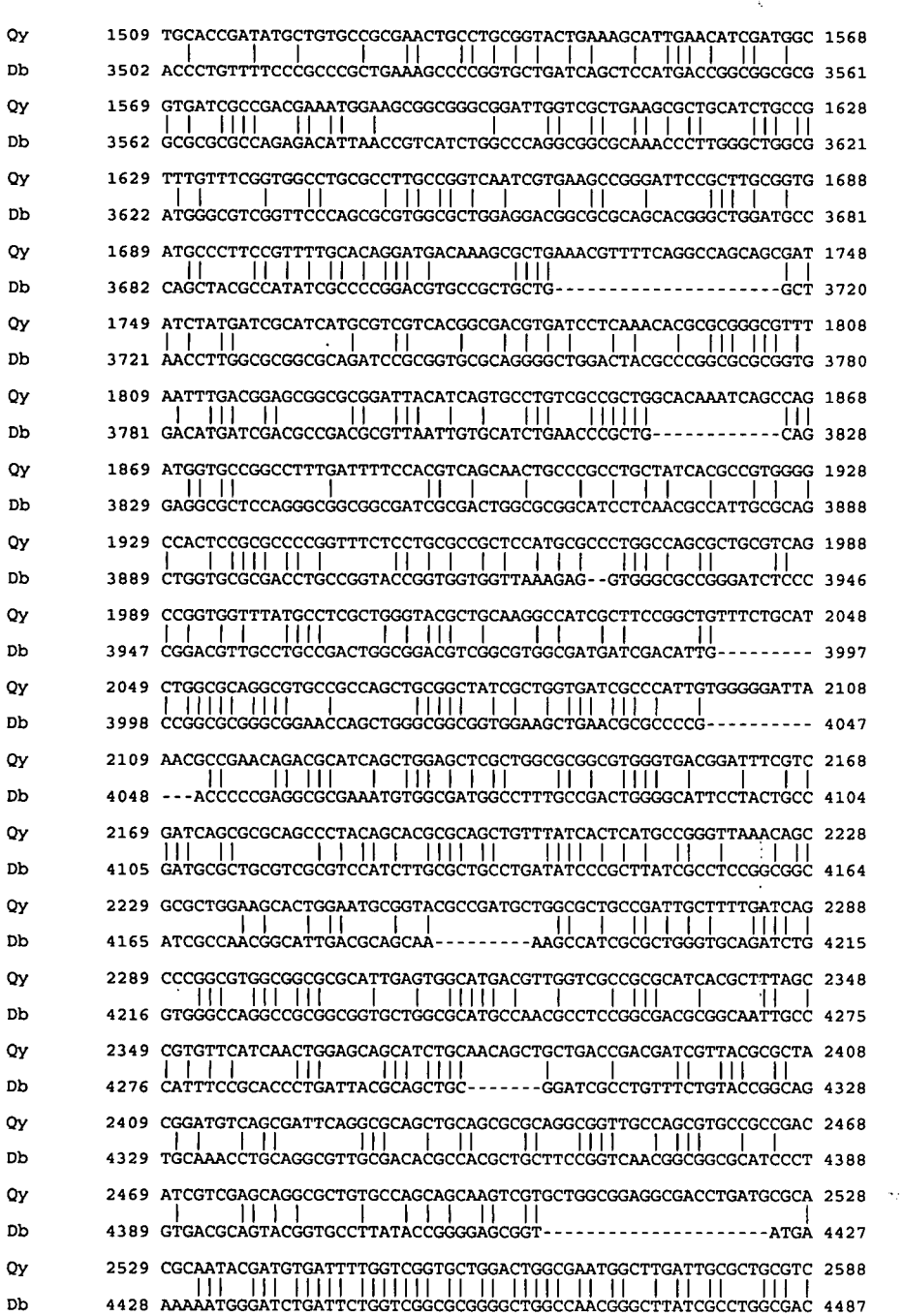


RESULT 11
US-10-808-807-18
; Sequence 18, Application US/10808807
; Publication No. US20040253663A1
; GENERAL INFORMATION:
; APPLICANT: E.I. du Pont deNemours and Co., Inc.
; APPLICANT: Cheng, Qiong
; APPLICANT: Tao, Luan
; APPLICANT: Sedkova, Natalia
; TITLE OF INVENTION: GENES ENCODING CAROTENOID COMPOUNDS
; FILE REFERENCE: CL2365 US NA
; CURRENT APPLICATION NUMBER: US/10/808,807
; CURRENT FILING DATE: 2004-03-24
; PRIOR APPLICATION NUMBER: US 60/477,874
; PRIOR FILING DATE: 2003-06-12
; PRIOR APPLICATION NUMBER: US 60/527,083
; PRIOR FILING DATE: 2003-12-03
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 18
; LENGTH: 8814
; TYPE: DNA
; ORGANISM: Pantoea agglomerans strain DC404
US-10-808-807-18

Query Match 30.6%; Score 2138.6; DB 8; Length 8814;
Best Local Similarity 60.7%; Pred. No. 0;
Matches 3811; Conservative 0; Mismatches 2279; Indels 185; Gaps 12;



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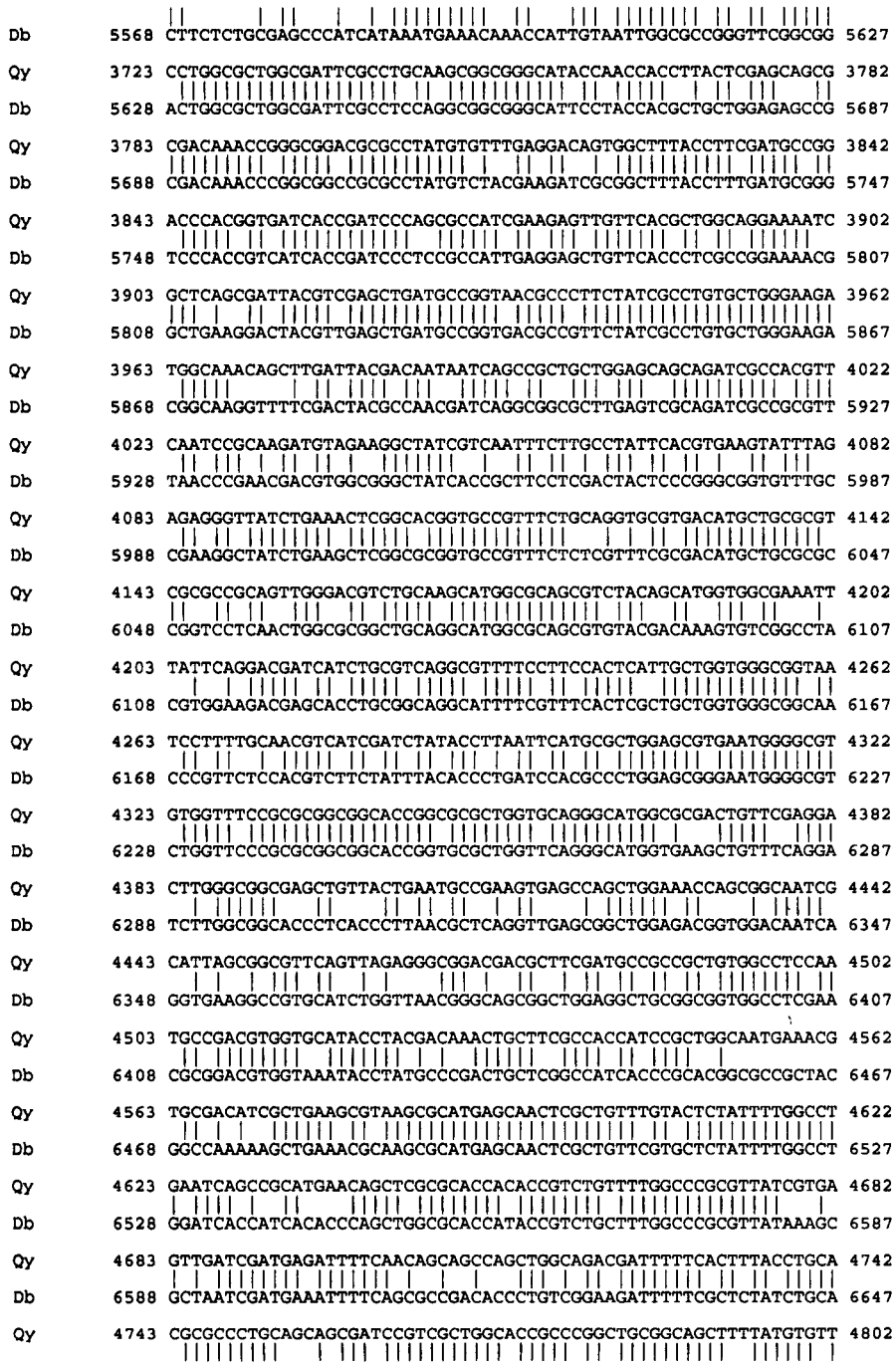
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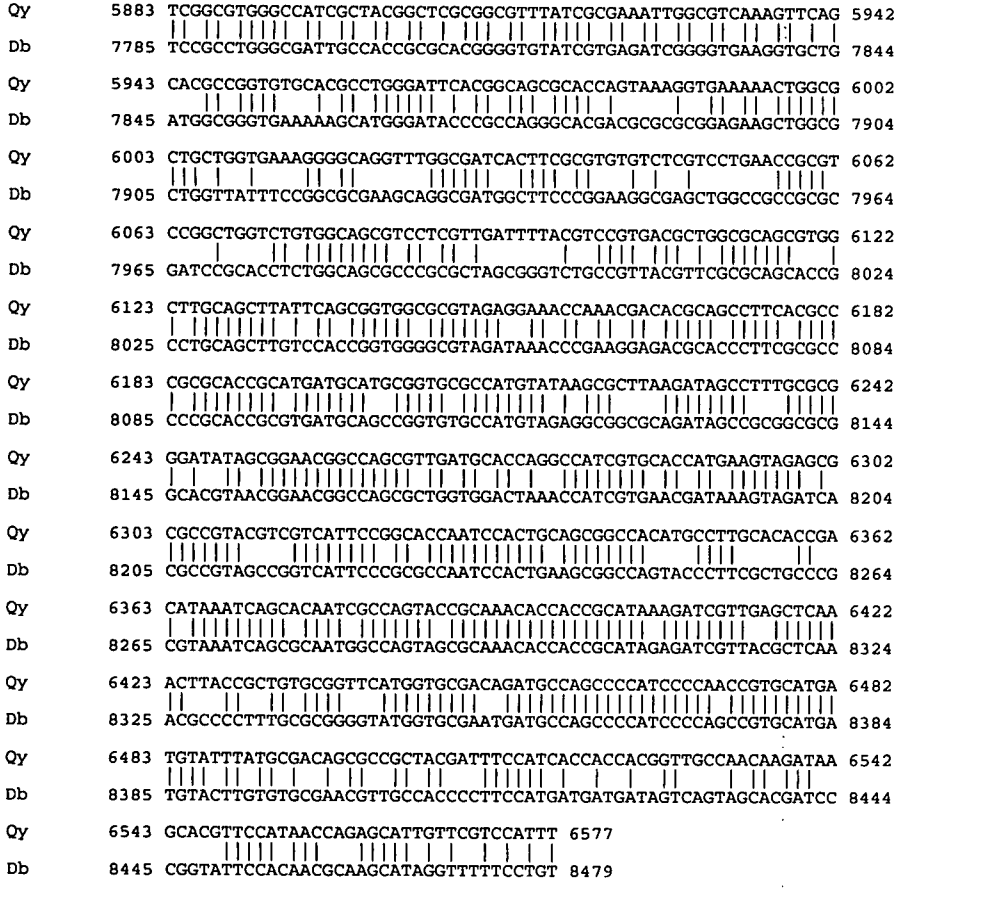

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; APPLICANT: Sharpe, Pamela L
; APPLICANT: Bosak, Melissa
; APPLICANT: Tao, Luan
; APPLICANT: Sedkova, Natalia
; APPLICANT: Cheng, Qiong L
; TITLE OF INVENTION: Optimized Bacterial Host Strains of Methylomonas sp. 16A
; FILE REFERENCE: CL-2230 US NA
; CURRENT APPLICATION NUMBER: US/10/997,844
; CURRENT FILING DATE: 2004-11-24
; PRIOR APPLICATION NUMBER: US 60/527,083
; PRIOR FILING DATE: 2003-12-03
; PRIOR APPLICATION NUMBER: US 60/527,877
; PRIOR FILING DATE: 2003-12-08
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 41
; LENGTH: 8814
; TYPE: DNA
; ORGANISM: Pantoea agglomerans
US-10-997-844-41

Query Match 30.6%; Score 2138.6; DB 9; Length 8814;
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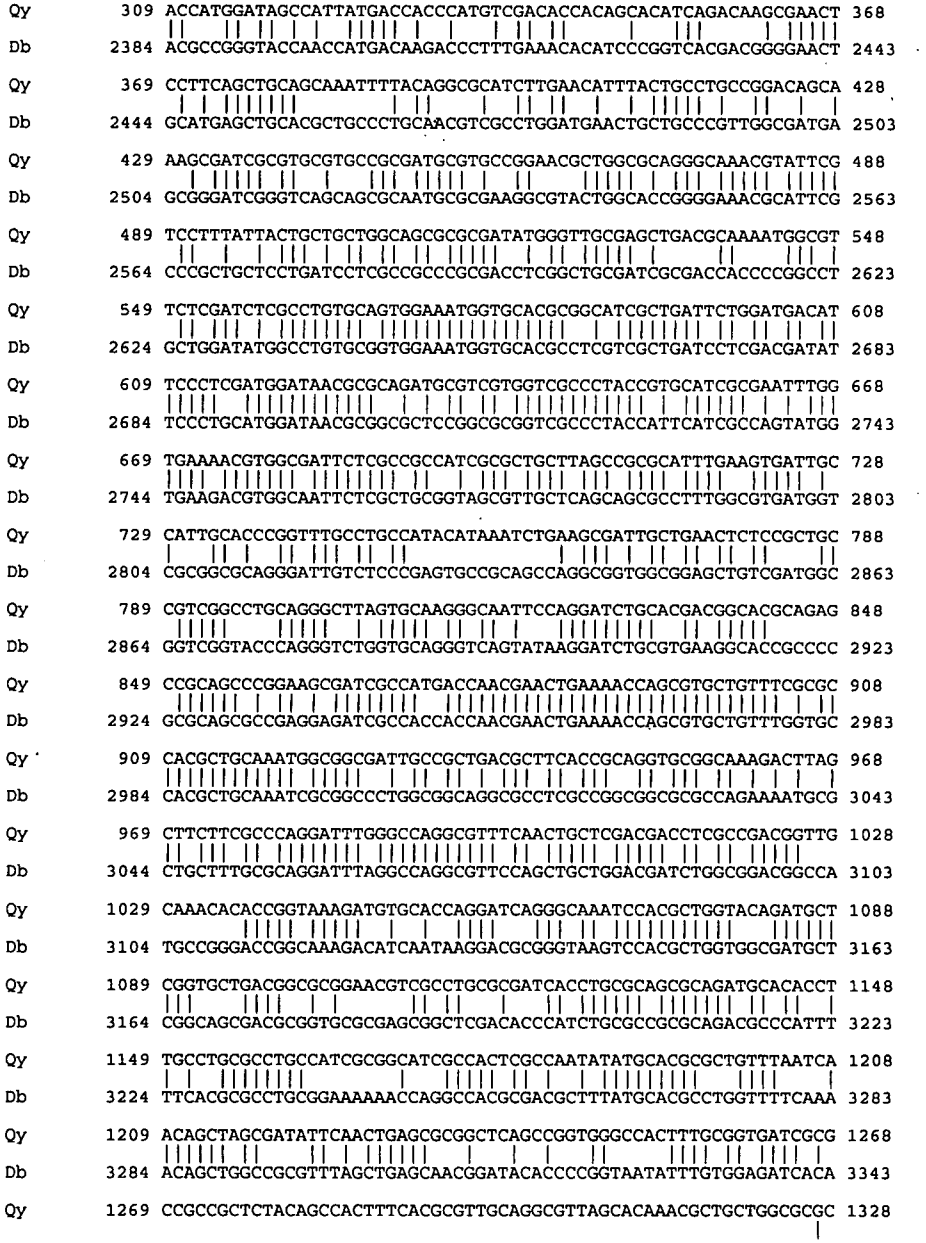

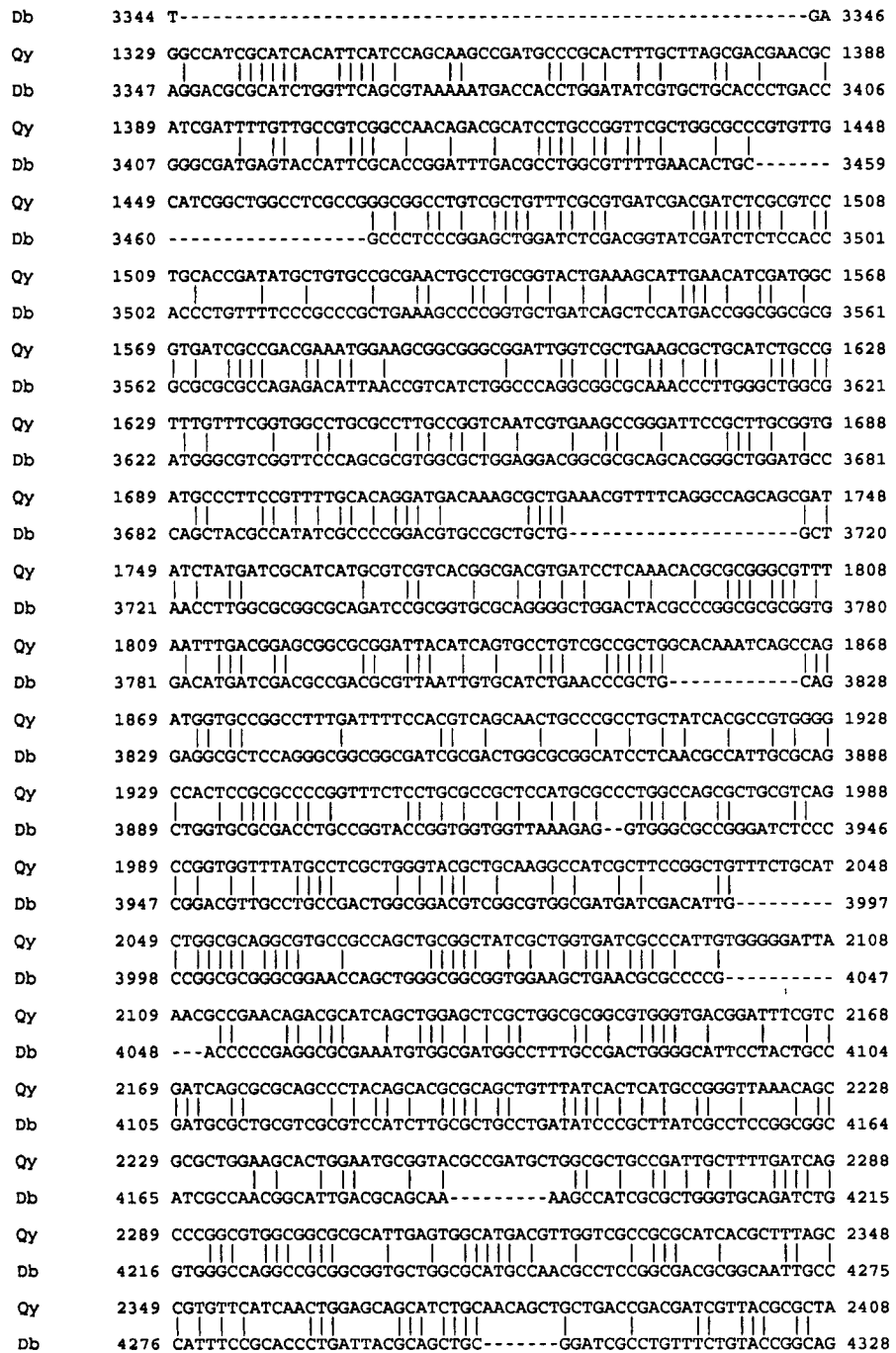

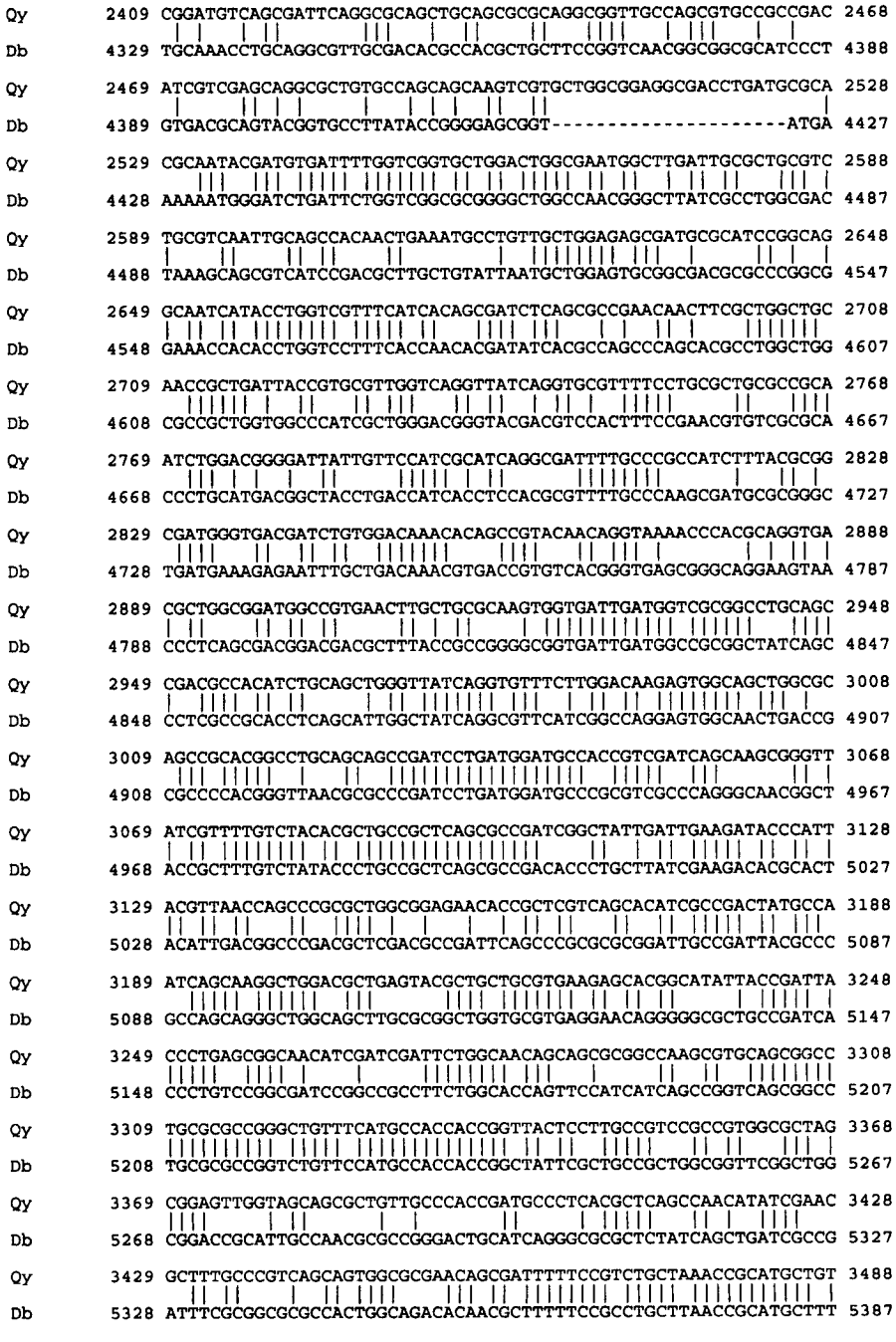

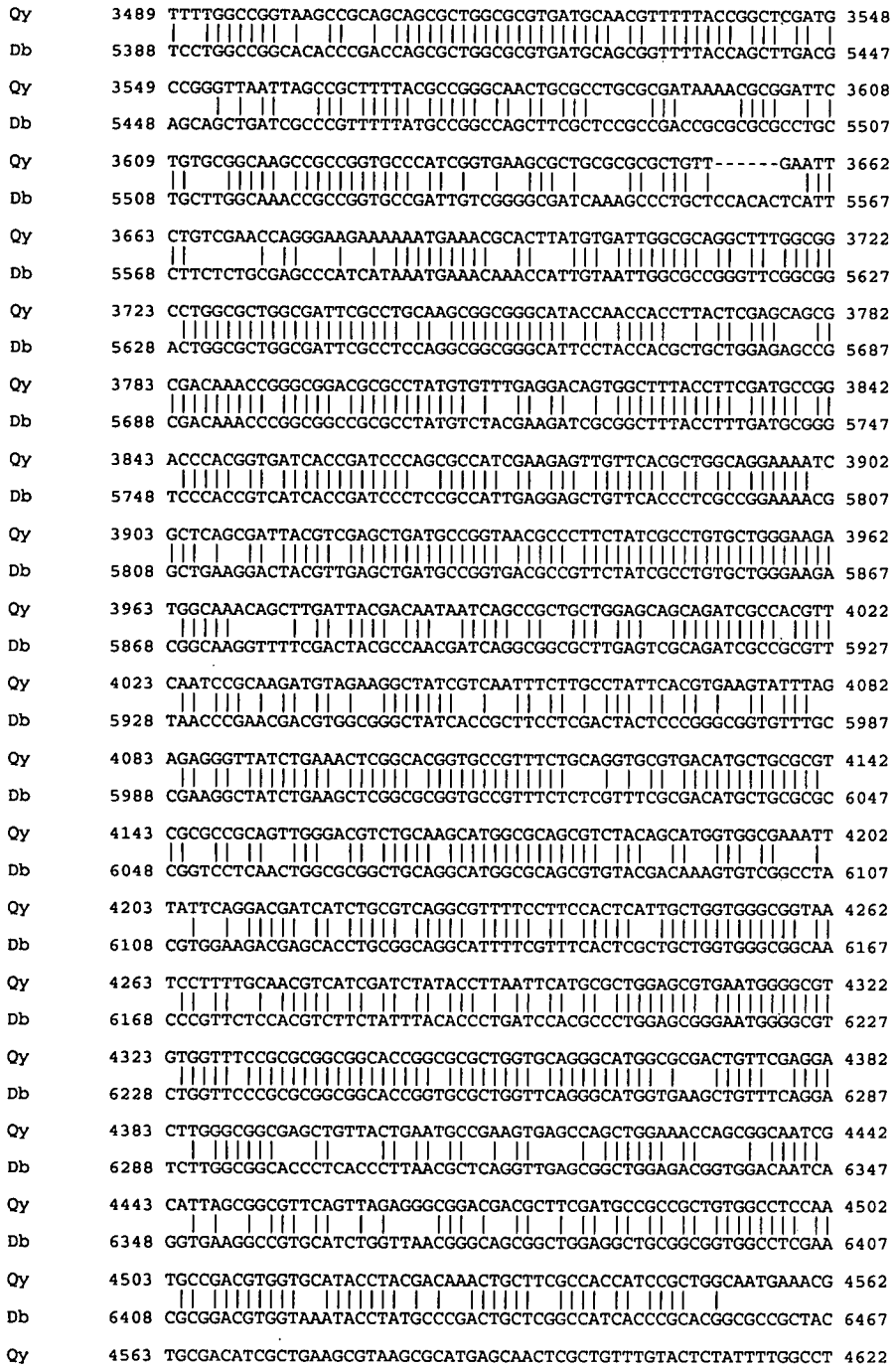
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;  APPLICANT: Cheng, Qiong
;  APPLICANT:  Tao, Luan
;  APPLICANT:  Yao, Henry
;  TITLE OF INVENTION: Novel Carotenoid Ketolases
;  FILE REFERENCE: CL2460 US NA
;  CURRENT APPLICATION NUMBER: US/11/015,433
;  CURRENT FILING DATE:  2004-12-17
;  PRIOR APPLICATION NUMBER: US 60/531310
;  PRIOR FILING DATE: 2003-12-19
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;  SOFTWARE: PatentIn version 3.3
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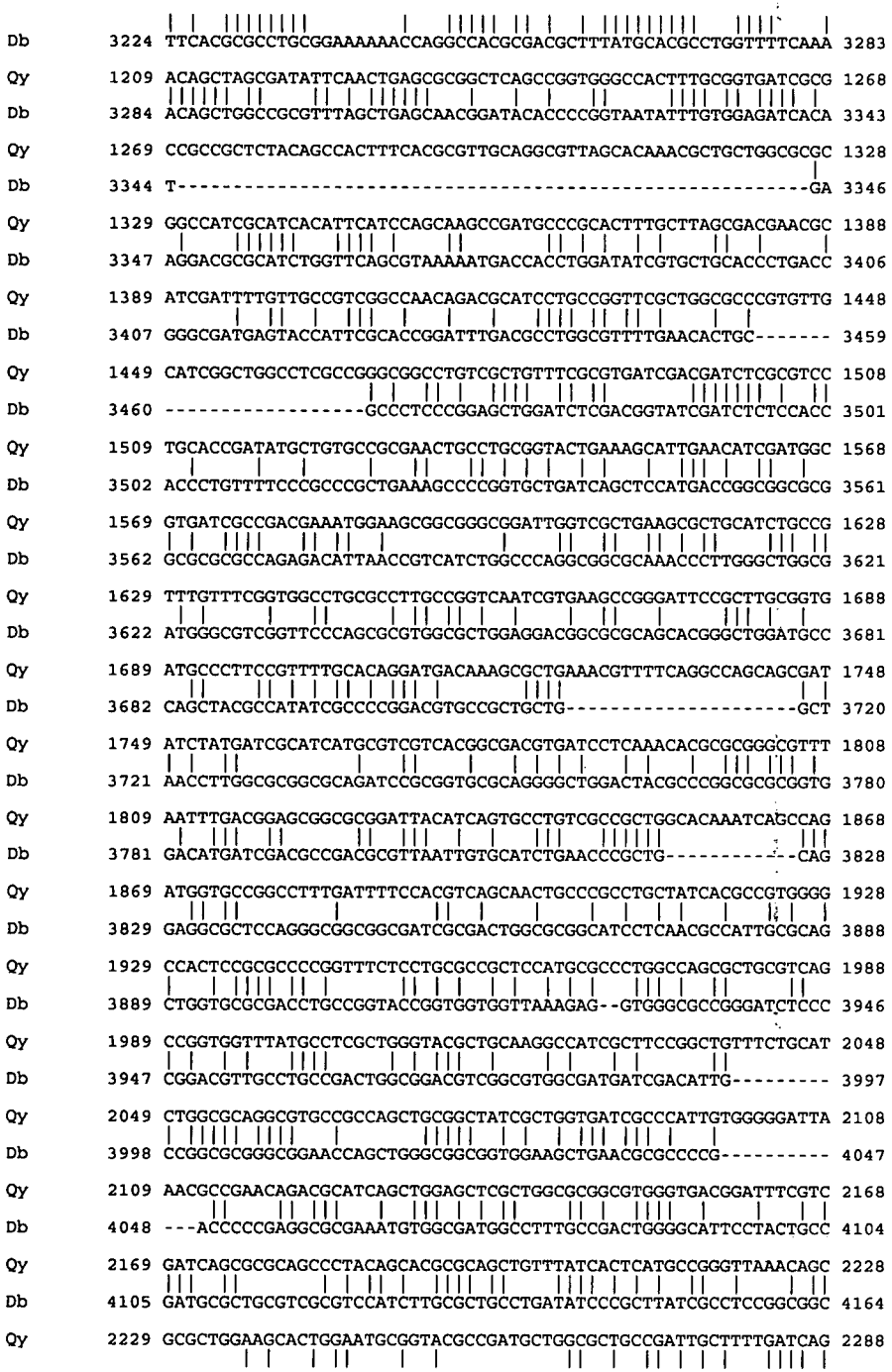
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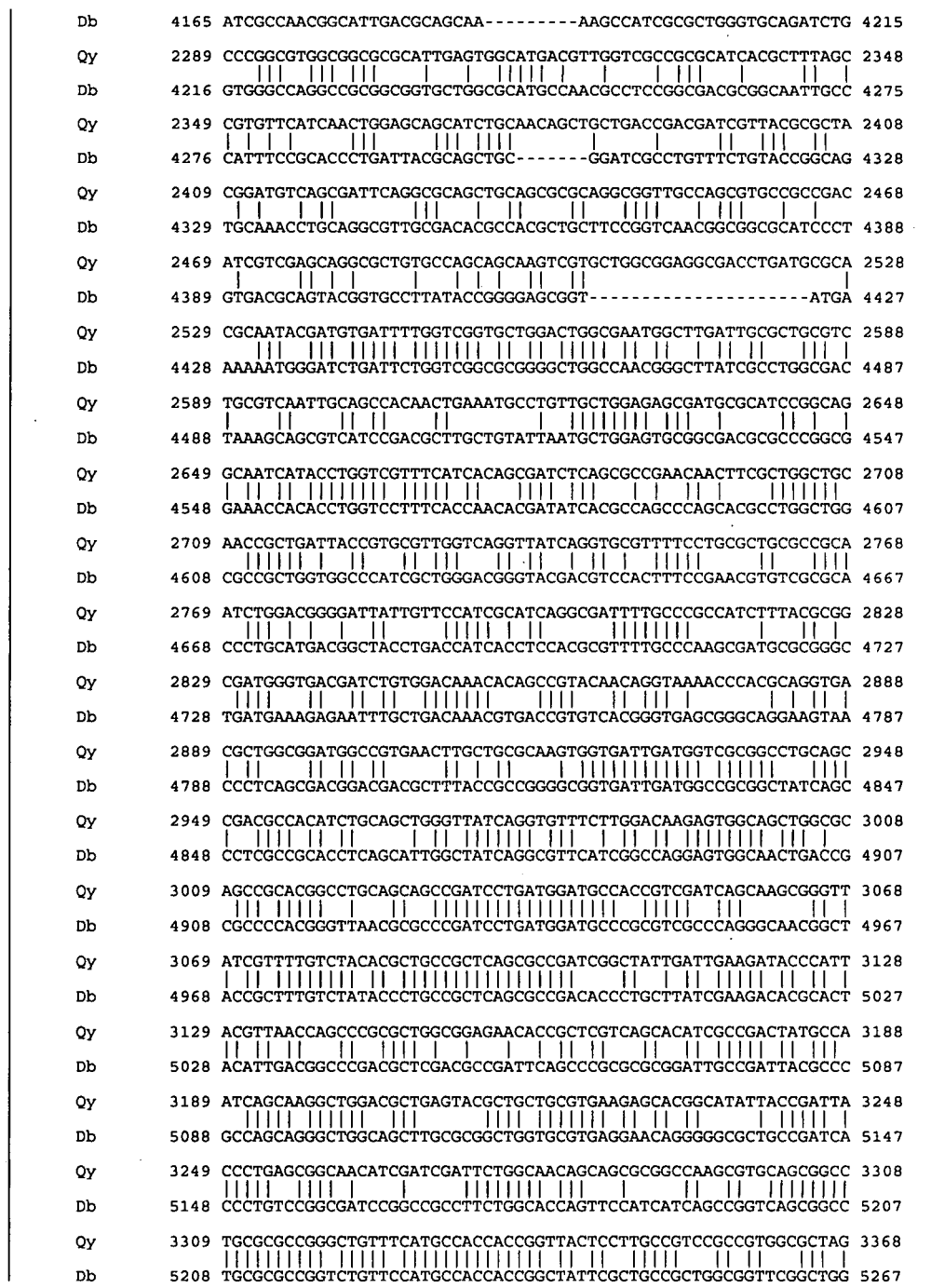
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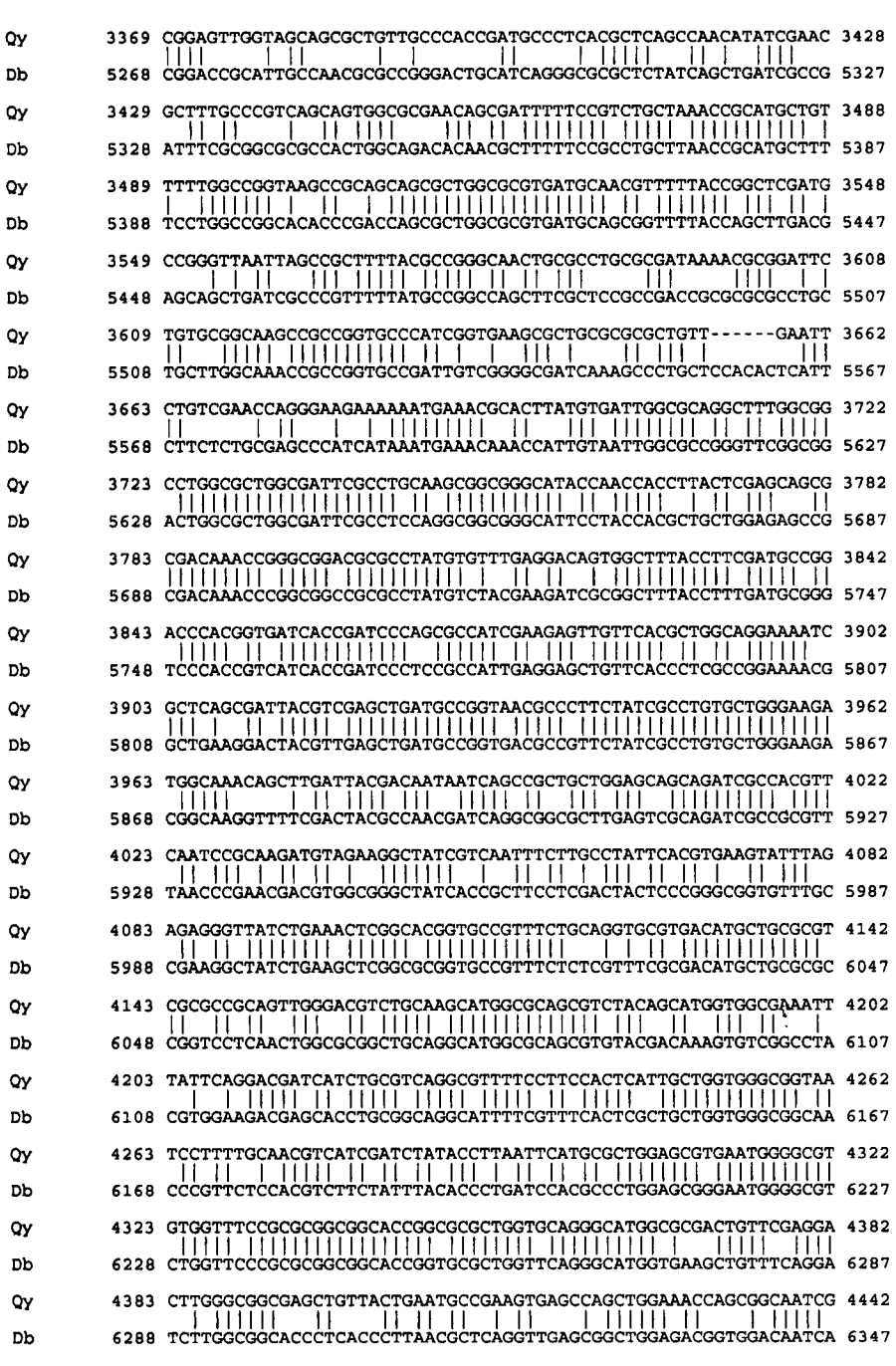
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;  APPLICANT:  Hart, Elizabeth A.
;  TITLE OF INVENTION: Diterpene-Producing Unicellular Organism
;  FILE REFERENCE: P02080US1/10025547
;  CURRENT APPLICATION NUMBER: US/10/041,018
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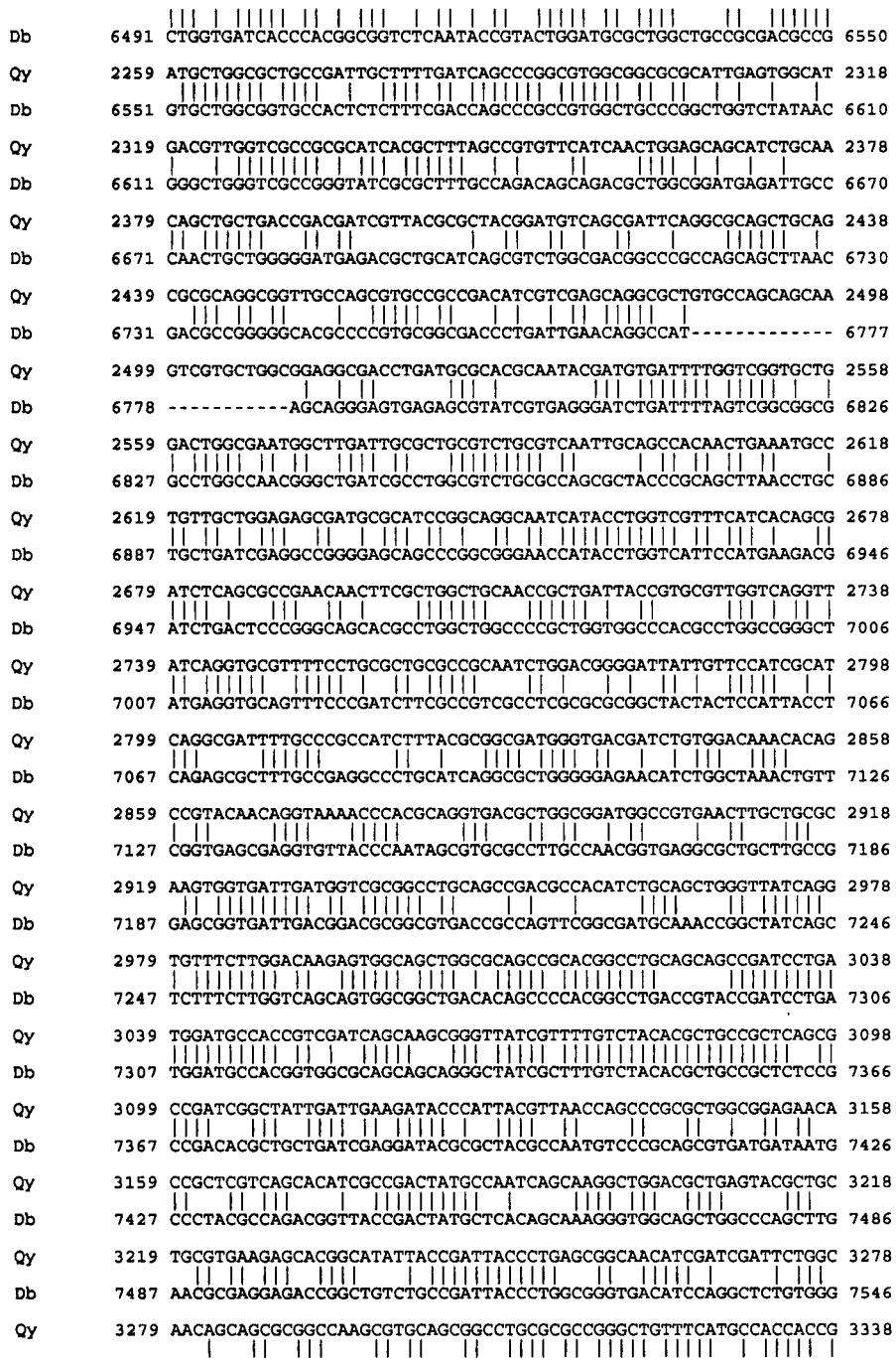
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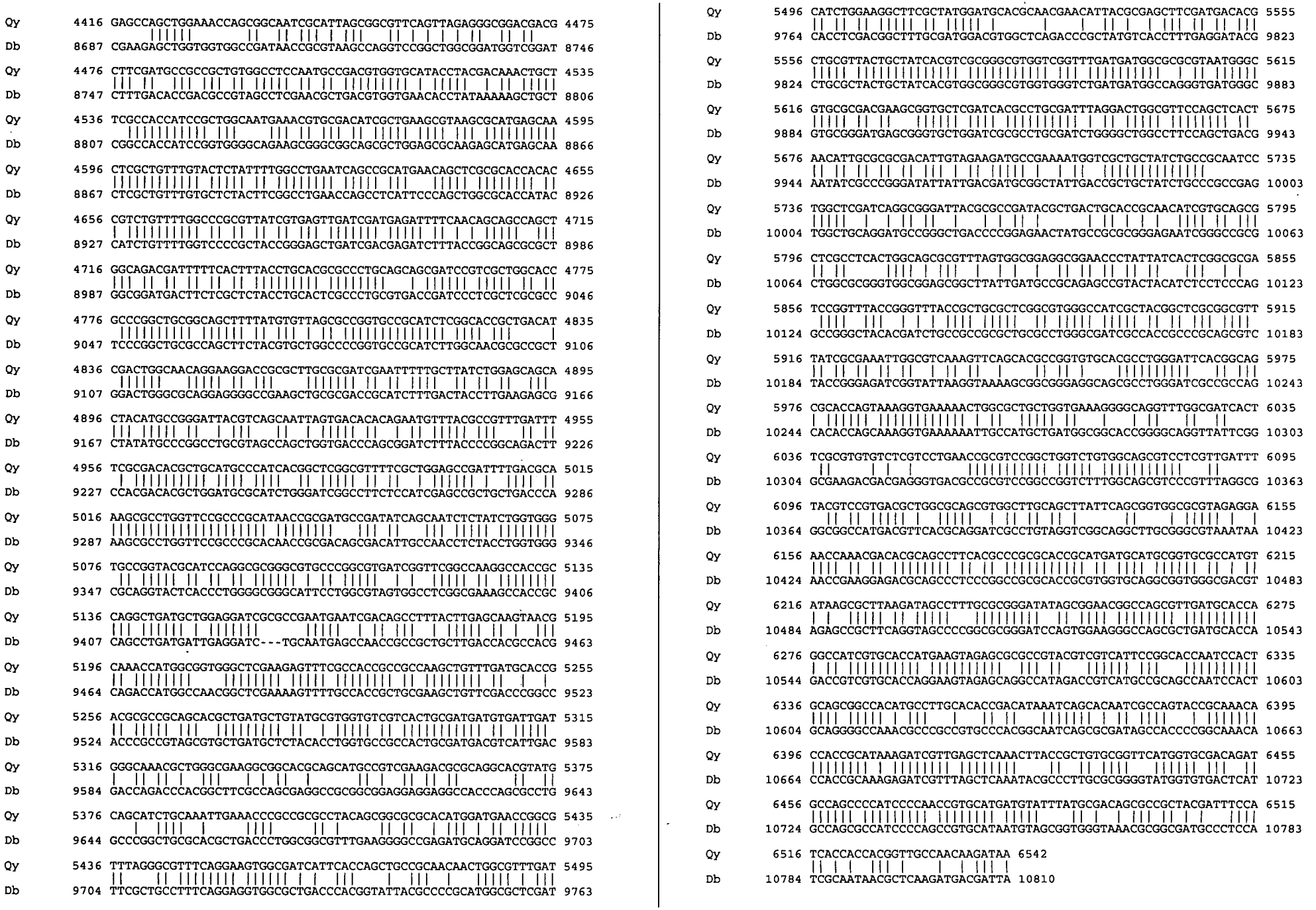

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; Sequence 6, Application US/10997844
; Publication No. US20050124033A1
; GENERAL INFORMATION:
; APPLICANT: Sharpe, Pamela L
; APPLICANT: Bosak, Melissa
; APPLICANT: Tao, Luan
; APPLICANT: Sedkova, Natalia
; APPLICANT: Cheng, Qiong L
; TITLE OF INVENTION: Optimized Bacterial Host Strains of Methylomonas sp. 16A
; FILE REFERENCE: CL-2230 US NA
; CURRENT APPLICATION NUMBER: US/10/997,844
; CURRENT FILING DATE: 2004-11-24
; PRIOR APPLICATION NUMBER: US 60/527,083
; PRIOR FILING DATE: 2003-12-03
; PRIOR APPLICATION NUMBER: US 60/527,877
; PRIOR FILING DATE: 2003-12-08
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 6
; LENGTH: 5632
; TYPE: DNA
; ORGANISM: Pantoea agglomerans
US-10-997-844-6

Query Match 23.7%; Score 1661.4; DB 9; Length 5632;
Best Local Similarity 67.0%; Pred. No. 0;
Matches 2390; Conservative 0; Mismatches 1166; Indels 9; Gaps 2;

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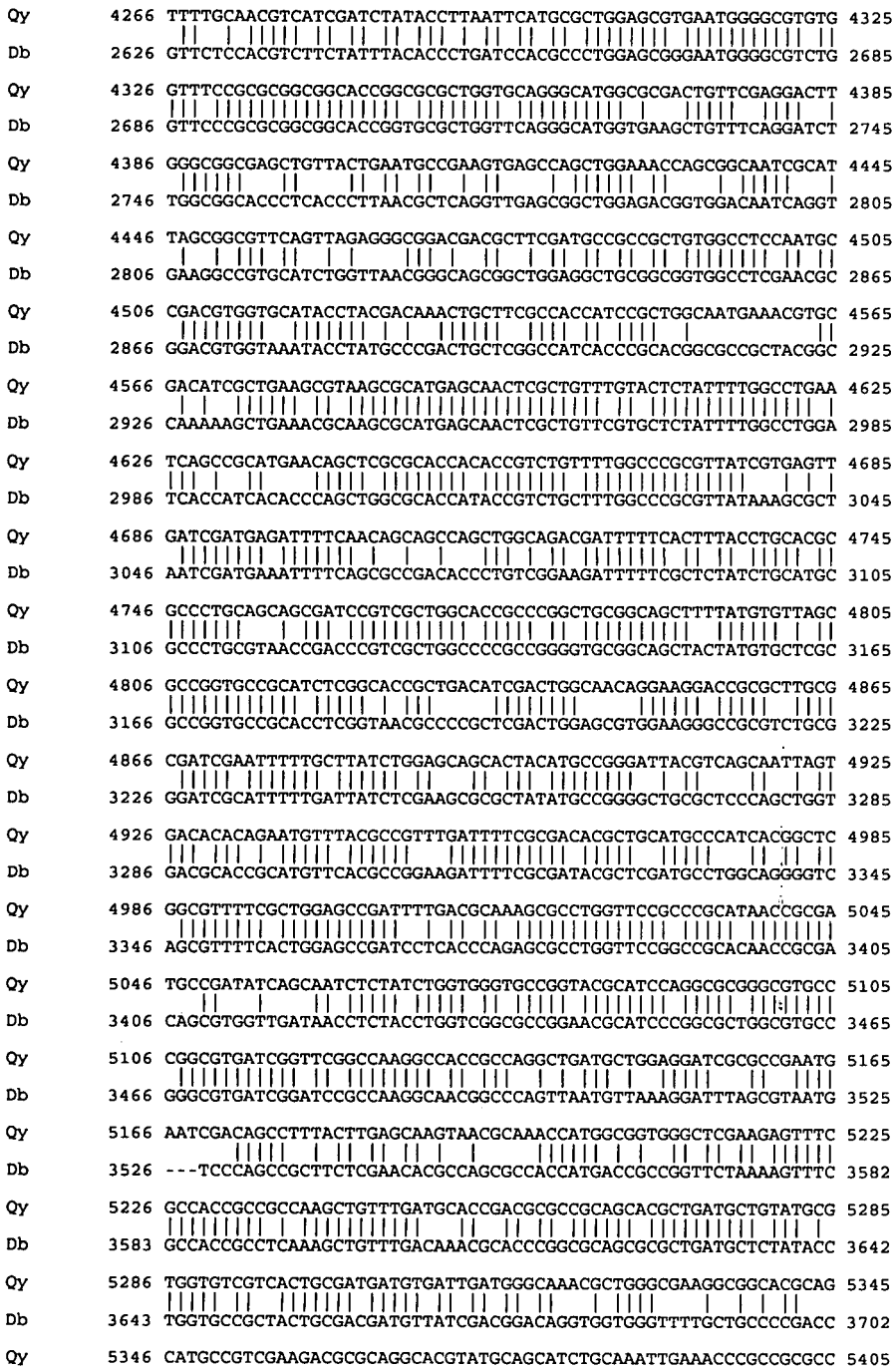

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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

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Perfect score: 6999
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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	2	78.2	1.1	888	1	US-10-967-671-3	Sequence 3, Appli
	3	60.8	0.9	1116	1	US-10-467-962B-40	Sequence 40, Appl
	4	47.2	0.7	783	1	US-10-793-626-223	Sequence 223, App
	5	47.2	0.7	3444	1	US-10-793-626-4144	Sequence 4144, Ap
c	6	47.2	0.7	4045	1	US-10-793-626-3929	Sequence 3929, Ap
	7	42.2	0.6	346	1	US-10-802-796-427	Sequence 427, App
	8	41.2	0.6	1278	1	US-10-858-730-32	Sequence 32, Appl
	9	40.4	0.6	5558	9	US-11-077-550-137	Sequence 137, App
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ALIGNMENTS

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; Sequence 1, Application US/10967671
; Publication No. US20050245728A1
; GENERAL INFORMATION:
; APPLICANT: EDWARDS, ALED
; APPLICANT: DHARAMSI, AKIL
; APPLICANT: VEDADI, MASOUD
; APPLICANT: KIMBER, MATTHEW
; APPLICANT: VALLEE, FRANCOIS
; TITLE OF INVENTION: NOVEL PURIFIED POLYPEPTIDES FROM PSEUDOMONAS AERUGINOSA
; FILE REFERENCE: IPT-261.01
; CURRENT APPLICATION NUMBER: US/10/967,671
; CURRENT FILING DATE: 2004-10-18
; PRIOR APPLICATION NUMBER: PCT/CA03/00714
; PRIOR FILING DATE: 2003-05-21
; PRIOR APPLICATION NUMBER: 60/382,443
; PRIOR FILING DATE: 2002-05-21
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: PatentIn Ver. 3.3
; SEQ ID NO 1
; LENGTH: 888
; TYPE: DNA
; ORGANISM: Pseudomonas aeruginosa
US-10-967-671-1

Query Match 1.2%; Score 81.4; DB 1; Length 888;
Best Local Similarity 50.3%; Pred. No. 8.1e-12;
Matches 258; Conservative 0; Mismatches 246; Indels 9; Gaps 2;

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; Sequence 3, Application US/10967671
; Publication No. US20050245728A1
; GENERAL INFORMATION:
; APPLICANT: EDWARDS, ALED
; APPLICANT: DHARAMSI, AKIL
; APPLICANT: VEDADI, MASOUD
; APPLICANT: KIMBER, MATTHEW
; APPLICANT: VALLEE, FRANCOIS
; TITLE OF INVENTION: NOVEL PURIFIED POLYPEPTIDES FROM PSEUDOMONAS AERUGINOSA
; FILE REFERENCE: IPT-261.01
; CURRENT APPLICATION NUMBER: US/10/967,671
; CURRENT FILING DATE: 2004-10-18
; PRIOR APPLICATION NUMBER: PCT/CA03/00714
; PRIOR FILING DATE: 2003-05-21
; PRIOR APPLICATION NUMBER: 60/382,443
; PRIOR FILING DATE: 2002-05-21
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: PatentIn Ver. 3.3
; SEQ ID NO 3
; LENGTH: 888
; TYPE: DNA
; ORGANISM: Pseudomonas aeruginosa
US-10-967-671-3

Query Match 1.1%; Score 78.2; DB 1; Length 888;
Best Local Similarity 49.9%; Pred. No. 5.5e-11;
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Qy        536 CGCAAAATGGCGTTCTCGATCTCGCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGA 595
Db        182 CGCCGCAGCGCGCCGACGCCGCGGCCTGCGCGGTGGAGCTGATCCATGCCTACTCGCTGG 241

Qy        596 TTCTGGATGACATTCCCTCGATGGATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGC 655
Db        242 TCCACGACGACCTGCCGGCAATGGACGACGACGACCTGCGCCGTGGACAGCCGACCACCC 301

Qy        656 ATCGCGAATTTGGTGAAAACGTGGCGATTCTCGCCGCCATCGCGCTGCTTAGCCGCGCAT 715
Db        302 ACCGGGCCTTCGACGAGGCCACCGCGATCCTCGCCGCCGACGGCTTGCAGGCGCTGGCCT 361

Qy        716 TTGAAGTGATTGCCATTGCACCCGGTTTGCCTGCCATACAT------AAATCTGAAGCGA 769
Db        362 TCGAAGTGCTCGCCGACACCCGGCGCAATCCGCAGGAACATGCCGTCTGTCTGGAAATGC 421

Qy        770 TTGCTGAACTCTCCGCTGCCGTCGGCCTGCAGGGCTTAGTGCAAGGGCAATTCCAGGATC 829
Db        422 TCACCCGCCTGGCGCGCGCCGCAGGTTCCGCCGGCATGGTCGGCGGCCAGGCGATCGACC 481

Qy        830 TGCACGACGGCACGCAGAGCCGCAGCCCGGAAGCGATCGCCATGACCAACGAACTGAAAA 889
Db        482 TCGGCTCGGTCGGCGTGGCCCTCGACCAGGCGGCCCTGGAAGTCATGCACCGGCACAAGA 541

Qy        890 CCAGCGTGCTGTTTCGCGCCACGCTGCAAATGGCGGCGATTGC---CGCTGACGCTTCAC 946
Db        542 CCGGCGCGCTGATCGAAGCCAGCGTGCGCCTCGGCGCCCTCGCCAGCGGTCGCGCCGAGC 601

Qy        947 CGCAGGTGCGGCAAAGACTTAGCTTCTTCGCCCAGGATTTGGGCCAGGCGTTTCAACTGC 1006
Db        602 CCGCCTCGCTGGCCGCCCTGGAGCGCTACGCCGAGGCGATCGGCCTGGCCTTCCAGGTGC 661

Qy       1007 TCGACGACCTCGCCGACGGTTGCAAACACACCG 1039
Db        662 AGGACGACATCCTCGACGTGGAAAGCGACACCG 694
```

RESULT 3
US-10-467-962B-40
; Sequence 40, Application US/10467962B
; Publication No. US20050246784A1
; GENERAL INFORMATION:
; APPLICANT: Plesch, Gunnar
; APPLICANT: Blau, Astrid
; APPLICANT: Daeschner, Klaus
; APPLICANT: Klein, Mathieu
; TITLE OF INVENTION: Identification of Herbicidally Active Substances
; FILE REFERENCE: 2000_857
; CURRENT APPLICATION NUMBER: US/10/467,962B
; CURRENT FILING DATE: 2003-08-14
; PRIOR APPLICATION NUMBER: PCT/EP02/01466
; PRIOR FILING DATE: 2002-02-13
; NUMBER OF SEQ ID NOS: 109
; SOFTWARE: PatentIn Vers. 2.0
; SEQ ID NO 40
; LENGTH: 1116
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1116)
US-10-467-962B-40

Query Match 0.9%; Score 60.8; DB 1; Length 1116;
Best Local Similarity 58.2%; Pred. No. 2e-06;
Matches 107; Conservative 0; Mismatches 77; Indels 0; Gaps 0;

```
Qy        559 GCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGATTCTGGATGACATTCCCTCGATG 618
Db        421 GCTTGCGCCGTCGAGATGATTCACACCATGTCGTTGATCCACGACGATCTCCCTTGTATG 480

Qy        619 GATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGCATCGCGAATTTGGTGAAAACGTG 678
Db        481 GATAACGACGATCTCCGCCGTGGAAAACCGACCAACCACAAAGTGTTTGGTGAAGACGTC 540

Qy        679 GCGATTCTCGCCGCCATCGCGCTGCTTAGCCGCGCATTTGAAGTGATTGCCATTGCACCC 738
Db        541 GCTGTTTTAGCCGGAGACGCGCTTCTCTCTTTCGCTTTCGAGCATTTAGCTTCGGCGACG 600

Qy        739 GGTT 742
Db        601 AGTT 604
```

RESULT 4
US-10-793-626-223
; Sequence 223, Application US/10793626
; Publication No. US20050255478A1
; GENERAL INFORMATION:
; APPLICANT: KIMMERLY, WILLIAM JOHN
; TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
; FILE REFERENCE: PU3480US
; CURRENT APPLICATION NUMBER: US/10/793,626
; CURRENT FILING DATE: 2004-03-04
; PRIOR APPLICATION NUMBER: 60/164,258

```
;  PRIOR FILING DATE: 1999-11-09
;  NUMBER OF SEQ ID NOS: 4472
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 223
;   LENGTH: 783
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic
;   OTHER INFORMATION: nucleic acid sequence
US-10-793-626-223

  Query Match             0.7%;  Score 47.2;  DB 1;  Length 783;
  Best Local Similarity   47.9%;  Pred. No. 0.0058;
  Matches  136;  Conservative    0;  Mismatches  148;  Indels    0;  Gaps    0;

Qy        550 CTCGATCTCGCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGATTCTGGATGACATT 609
              ||  ||   || |  ||| |||||||| | ||  |    ||  | ||||  |||||  |
Db         94 CTAAATAGTGCTTTAGCATTGGAAATGATTCATACTTATTCTTTAATTCATGATGATTTA 153

Qy        610 CCCTCGATGGATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGCATCGCGAATTTGGT 669
              ||  | ||||||||  |   |    ||| | ||        ||    |||   |  | ||||
Db        154 CCAGCAATGGATAATGACGATTACCGTAGAGGAAAATTAACAAATCATAAAGTTTATGGT 213

Qy        670 GAAAACGTGGCGATTCTCGCCGCCATCGCGCTGCTTAGCCGCGCATTTGAAGTGATTGCC 729
              |||      || ||||| || |     ||  |  | |     || ||||||  |  || |
Db        214 GAATGGAAAGCCATTCTTGCTGGTGATGCATTATTAACAAAAGCTTTTGAATTAGTTTCT 273

Qy        730 ATTGCACCCGGTTTGCCTGCCATACATAAATCTGAAGCGATTGCTGAACTCTCCGCTGCC 789
              | ||   |      |   | |     |||          ||       ||| ||    ||
Db        274 AATGATACTACCATTGAAGATAGTGTGAAAGTAAGTATTATAAAAAGACTTTCAAAAGCA 333

Qy        790 GTCGGCCTGCAGGGCTTAGTGCAAGGGCAATTCCAGGATCTGCA 833
              || |    |||  | |||   || |||    |  ||| || |
Db        334 AGTGGACATTTGGGAATGGTGGGTGGCCAAGCGCTTGATATGGA 377


RESULT 5
US-10-793-626-4144
; Sequence 4144, Application US/10793626
; Publication No. US20050255478A1
; GENERAL INFORMATION:
;  APPLICANT: KIMMERLY, WILLIAM JOHN
;  TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
;  FILE REFERENCE: PU3480US
;  CURRENT APPLICATION NUMBER: US/10/793,626
;  CURRENT FILING DATE:  2004-03-04
;  PRIOR APPLICATION NUMBER: 60/164,258
;  PRIOR FILING DATE: 1999-11-09
;  NUMBER OF SEQ ID NOS: 4472
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4144
;   LENGTH: 3444
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic
;   OTHER INFORMATION: nucleic acid sequence
US-10-793-626-4144

  Query Match             0.7%;  Score 47.2;  DB 1;  Length 3444;
  Best Local Similarity   47.9%;  Pred. No. 0.011;
  Matches  136;  Conservative    0;  Mismatches  148;  Indels    0;  Gaps    0;

Qy        550 CTCGATCTCGCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGATTCTGGATGACATT 609
              ||  ||   || |  ||| |||||||| | ||  |    ||  | ||||  |||||  |
Db        958 CTAAATAGTGCTTTAGCATTGGAAATGATTCATACTTATTCTTTAATTCATGATGATTTA 1017

Qy        610 CCCTCGATGGATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGCATCGCGAATTTGGT 669
              ||  | ||||||||  |   |    ||| | ||        ||    |||   |  | ||||
Db       1018 CCAGCAATGGATAATGACGATTACCGTAGAGGAAAATTAACAAATCATAAAGTTTATGGT 1077

Qy        670 GAAAACGTGGCGATTCTCGCCGCCATCGCGCTGCTTAGCCGCGCATTTGAAGTGATTGCC 729
              |||      || ||||| || |     ||  |  | |     || ||||||  |  || |
Db       1078 GAATGGAAAGCCATTCTTGCTGGTGATGCATTATTAACAAAAGCTTTTGAATTAGTTTCT 1137

Qy        730 ATTGCACCCGGTTTGCCTGCCATACATAAATCTGAAGCGATTGCTGAACTCTCCGCTGCC 789
              | ||   |      |   | |     |||          ||       ||| ||    ||
Db       1138 AATGATACTACCATTGAAGATAGTGTGAAAGTAAGTATTATAAAAAGACTTTCAAAAGCA 1197

Qy        790 GTCGGCCTGCAGGGCTTAGTGCAAGGGCAATTCCAGGATCTGCA 833
              || |    |||  | |||   || |||    |  ||| || |
Db       1198 AGTGGACATTTGGGAATGGTGGGTGGCCAAGCGCTTGATATGGA 1241


RESULT 6
US-10-793-626-3929/c
; Sequence 3929, Application US/10793626
; Publication No. US20050255478A1
; GENERAL INFORMATION:
;  APPLICANT: KIMMERLY, WILLIAM JOHN
;  TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
;  FILE REFERENCE: PU3480US
;  CURRENT APPLICATION NUMBER: US/10/793,626
;  CURRENT FILING DATE:  2004-03-04
;  PRIOR APPLICATION NUMBER: 60/164,258
;  PRIOR FILING DATE: 1999-11-09
;  NUMBER OF SEQ ID NOS: 4472
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3929
;   LENGTH: 4045
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic
;   OTHER INFORMATION: nucleic acid sequence
US-10-793-626-3929

  Query Match             0.7%;  Score 47.2;  DB 1;  Length 4045;
  Best Local Similarity   47.9%;  Pred. No. 0.012;
  Matches  136;  Conservative    0;  Mismatches  148;  Indels    0;  Gaps    0;

Qy        550 CTCGATCTCGCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGATTCTGGATGACATT 609
              ||  ||   || |  ||| |||||||| | ||  |    ||  | ||||  |||||  |
Db       2121 CTAAATAGTGCTTTAGCATTGGAAATGATTCATACTTATTCTTTAATTCATGATGATTTA 2062

Qy        610 CCCTCGATGGATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGCATCGCGAATTTGGT 669
              ||  | ||||||||  |   |    ||| | ||        ||    |||   |  | ||||
Db       2061 CCAGCAATGGATAATGACGATTACCGTAGAGGAAAATTAACAAATCATAAAGTTTATGGT 2002

Qy        670 GAAAACGTGGCGATTCTCGCCGCCATCGCGCTGCTTAGCCGCGCATTTGAAGTGATTGCC 729
              |||      || ||||| || |     ||  |  | |     || ||||||  |  || |
Db       2001 GAATGGAAAGCCATTCTTGCTGGTGATGCATTATTAACAAAAGCTTTTGAATTAGTTTCT 1942

Qy        730 ATTGCACCCGGTTTGCCTGCCATACATAAATCTGAAGCGATTGCTGAACTCTCCGCTGCC 789
              | ||   |      |   | |     |||          ||       ||| ||    ||
Db       1941 AATGATACTACCATTGAAGATAGTGTGAAAGTAAGTATTATAAAAAGACTTTCAAAAGCA 1882

Qy        790 GTCGGCCTGCAGGGCTTAGTGCAAGGGCAATTCCAGGATCTGCA 833
              || |    |||  | |||   || |||    |  ||| || |
Db       1881 AGTGGACATTTGGGAATGGTGGGTGGCCAAGCGCTTGATATGGA 1838


RESULT 7
US-10-802-796-427
; Sequence 427, Application US/10802796
; Publication No. US20050250104A1
; GENERAL INFORMATION:
;  APPLICANT: COLE, STEWART
;  APPLICANT:  BUCHRIESER-BROSCH, ROLAND
;  APPLICANT:  GORDON, STEPHEN
;  APPLICANT:  BILLAULT, ALAIN
;  TITLE OF INVENTION: A METHOD FOR ISOLATING A POLYNUCLEOTIDE OF INTEREST
;  TITLE OF INVENTION:  FROM THE GENOME OF A MYCOBACTERIUM USING A BAC-BASED
;  TITLE OF INVENTION:  DNA LIBRARY. APPLICATION TO THE DETECTION OF
;  TITLE OF INVENTION:  MYCOBACTERIA.
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;  FILE REFERENCE: 05394.0011-00000
;  CURRENT APPLICATION NUMBER: US/10/802,796
;  CURRENT FILING DATE:  2004-03-18
;  PRIOR APPLICATION NUMBER: US/09/673,476
;  PRIOR FILING DATE: 2002-03-29
;  PRIOR APPLICATION NUMBER: PCT/IB99/00740
;  PRIOR FILING DATE: 1999-04-16
;  PRIOR APPLICATION NUMBER: 09/060,756
;  PRIOR FILING DATE: 1998-04-16
;  NUMBER OF SEQ ID NOS: 743
;  SOFTWARE: PatentIn Ver. 2.2
; SEQ ID NO 427
;   LENGTH: 346
;   TYPE: DNA
;   ORGANISM: Mycobacterium tuberculosis
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (188)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (226)
;   OTHER INFORMATION: a, t, c or g
US-10-802-796-427

  Query Match             0.6%;  Score 42.2;  DB 1;  Length 346;
  Best Local Similarity   59.7%;  Pred. No. 0.081;
  Matches   71;  Conservative    0;  Mismatches   48;  Indels    0;  Gaps    0;

Qy       5641 ACGCCTGCGATTTAGGACTGGCGTTCCAGCTCACTAACATTGCGCGCGACATTGTAGAAG 5700
             |||||     | || ||| | ||  | ||||  || || |||  ||||||| ||  ||| |
Db         16 ACGCCGAGCAGTTGGGAATCGCTCTGCAGCAAACCAATATTCTGCGCGACGTTCGAGAGG 75

Qy       5701 ATGCCGAAAATGGTCGCTGCTATCTGCCGCAATCCTGGCTCGATCAGGCGGGATTACGC 5759
             |      ||||| ||   ||| |||||||     |  ||| || |      ||  |||||
Db         76 ACTTTTTGAATGGACGGATCTACCTGCCGCGCGACGAGCTGGACCGATTAGGCGTACGC 134


RESULT 8
US-10-858-730-32
; Sequence 32, Application US/10858730
; Publication No. US20050255568A1
; GENERAL INFORMATION:
;  APPLICANT: Bailey, Richard B.
;  APPLICANT:  Blomquist, Paul
;  APPLICANT:  Doten, Reed
;  APPLICANT:  Driggers, Edward M.
;  APPLICANT:  Madden, Kevin T.
;  APPLICANT:  O'Leary, Jessica
;  APPLICANT:  O'Toole, George
;  APPLICANT:  Trueheart, Joshua
;  APPLICANT:  Walbridge, Michael J.
;  APPLICANT:  Yorgey, Peter S.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR AMINO ACID
;  TITLE OF INVENTION:  PRODUCTION
;  FILE REFERENCE: 14184-030001
;  CURRENT APPLICATION NUMBER: US/10/858,730
;  CURRENT FILING DATE:  2004-06-01
;  PRIOR APPLICATION NUMBER: US 60/475,000
;  PRIOR FILING DATE: 2003-05-30
;  PRIOR APPLICATION NUMBER: US 60/551,860
;  PRIOR FILING DATE: 2004-03-10
;  NUMBER OF SEQ ID NOS: 364
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 32
;   LENGTH: 1278
;   TYPE: DNA
;   ORGANISM: Streptomyces coelicolor
US-10-858-730-32

  Query Match             0.6%;  Score 41.2;  DB 1;  Length 1278;
  Best Local Similarity   56.7%;  Pred. No. 0.26;
  Matches   76;  Conservative    0;  Mismatches   58;  Indels    0;  Gaps    0;

Qy       5018 GCGCCTGGTTCCGCCCGCATAACCGCGATGCCGATATCAGCAATCTCTATCTGGTGGGTG 5077
             ||  | | |||  | |||    |  ||| | | | ||| ||||  |||  ||||| || |
Db       1004 GCATCGGCTTCGACTCGCTGCGCTACGACGACCAGATCGGCAAGATCTCGCTGGTCGGCG 1063

Qy       5078 CCGGTACGCATCCAGGCGCGGGCGTGCCCGGCGTGATCGGTTCGGCCAAGGCCACCGCCA 5137
             ||||||  | |         |||||||  ||| ||   ||    | ||     ||  ||||
Db       1064 CCGGTATGAAGAGCAATCCGGGCGTCACCGCCGACTTCTTCACCGCGCTCTCCGACGCCG 1123

Qy       5138 GGCTGATGCTGGAG 5151
              || |||   | |||
Db       1124 GGGTGAACATCGAG 1137


RESULT 9
US-11-077-550-137
; Sequence 137, Application US/11077550
; Publication No. US20050244435A1
; GENERAL INFORMATION:
;  APPLICANT: Shone, Clifford Charles
;  APPLICANT:  Quinn, Conrad Padraig
;  APPLICANT:  Foster, Keith Alan
;  APPLICANT:  Chaddock, John
;  APPLICANT:  Marks, Philip
;  APPLICANT:  Sutton, J. Mark
;  APPLICANT:  Stancombe, Patrick
;  APPLICANT:  Wayne, Jonathan
;  TITLE OF INVENTION: Recombinant Toxin Fragments
;  FILE REFERENCE: 1581.0130004
;  CURRENT APPLICATION NUMBER: US/11/077,550
;  CURRENT FILING DATE:  2005-03-11
;  PRIOR APPLICATION NUMBER: 10/241,596
;  PRIOR FILING DATE: 2002-09-12
;  PRIOR APPLICATION NUMBER: 09/255,829
;  PRIOR FILING DATE: 1999-02-23
;  PRIOR APPLICATION NUMBER: PCT/GB97/02273
;  PRIOR FILING DATE: 1997-08-22
;  PRIOR APPLICATION NUMBER: 08/782,893
;  PRIOR FILING DATE: 1996-12-27
;  PRIOR APPLICATION NUMBER: GB9625996.5
;  PRIOR FILING DATE: 1996-12-13
;  PRIOR APPLICATION NUMBER: GB9617671.4
;  PRIOR FILING DATE: 1996-08-23
;  NUMBER OF SEQ ID NOS: 179
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 137
;   LENGTH: 5558
;   TYPE: DNA
;   ORGANISM: Clostridium botulinum
US-11-077-550-137

  Query Match             0.6%;  Score 40.4;  DB 9;  Length 5558;
  Best Local Similarity   54.8%;  Pred. No. 0.8;
  Matches   80;  Conservative    0;  Mismatches   66;  Indels    0;  Gaps    0;

Qy       6835 TCAATTTATCCGCCATCCTATCCAAAGCTTTGCAACATGAAATTCGCACGACTGCAGCAG 6894
             |||||  | ||||    |  ||  || | |  ||||  |||||   ||          || |
Db       2720 TCAATATCTCCGGTCTGGTAAGCACAACCATGCAGAATGAAGCCCGTCGTCTGCGTGCCG 2779

Qy       6895 AAAGATGGAAGCGTGAAAACAGTGAAGGTTTGCAGGAACTCAATCGCATAACCGAAGAGC 6954
             || | |||||    |||||    |||||  ||   ||  ||   ||  | |  |||  |
Db       2780 AACGCTGGAAAGCGGAAAATCAGGAAGGGATGGCTGAGGTCGCCCGGTTTATTGAAATGA 2839

Qy       6955 ACGGTTTATTGTCGGATGAATACAGG 6980
              ||||  |  ||  | || ||  |||||
Db       2840 ACGGCTCTTTTGCTGACGAGAACAGG 2865


RESULT 10
US-10-858-730-31
; Sequence 31, Application US/10858730
; Publication No. US20050255568A1
; GENERAL INFORMATION:
```

```
;  APPLICANT: Bailey, Richard B.
;  APPLICANT:  Blomquist, Paul
;  APPLICANT:  Doten, Reed
;  APPLICANT:  Driggers, Edward M.
;  APPLICANT:  Madden, Kevin T.
;  APPLICANT:  O'Leary, Jessica
;  APPLICANT:  O'Toole, George
;  APPLICANT:  Trueheart, Joshua
;  APPLICANT:  Walbridge, Michael J.
;  APPLICANT:  Yorgey, Peter S.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR AMINO ACID
;  TITLE OF INVENTION:  PRODUCTION
;  FILE REFERENCE: 14184-030001
;  CURRENT APPLICATION NUMBER: US/10/858,730
;  CURRENT FILING DATE:  2004-06-01
;  PRIOR APPLICATION NUMBER: US 60/475,000
;  PRIOR FILING DATE: 2003-05-30
;  PRIOR APPLICATION NUMBER: US 60/551,860
;  PRIOR FILING DATE: 2004-03-10
;  NUMBER OF SEQ ID NOS: 364
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 31
;   LENGTH: 1266
;   TYPE: DNA
;   ORGANISM: Amycolatopsis mediterranei
US-10-858-730-31

  Query Match             0.6%;  Score 39.6;  DB 1;  Length 1266;
  Best Local Similarity   49.5%;  Pred. No. 0.68;
  Matches  102;  Conservative    0;  Mismatches  104;  Indels    0;  Gaps    0;

Qy       4330 CCGCGCGGCGGCACCGGCGCGCTGGTGCAGGGCATGGCGCGACTGTTCGAGGACTTGGGC 4389
             ||| || | | |||||  ||||| |  |||||           ||| | | || |||
Db        352 CCGAGCCGGGTCACCGAGGCGCTCGACCAGGGGTACATCGCGCTGGTGGCGGGCTTCCAG 411

Qy       4390 GGCGAGCTGTTACTGAATGCCGAAGTGAGCCAGCTGGAAACCAGCGGCAATCGCATTAGC 4449
             ||||    |       |    ||  | | |  |||||    | |||||      ||  | |
Db        412 GGCGTCGCGCAGGACACCAAGGACATCACCACGCTGGGCCGCGGCGGCTCGGACACCACC 471

Qy       4450 GGCGTTCAGTTAGAGGGCGGACGACGCTTCGATGCCGCCGCTGTGGCCTCCAATGCCGAC 4509
             | |||   | | |  | ||  |    | ||| | |  ||   |   |||| ||| |||
Db        472 GCCGTCGCGCTGGCCGCCGCGCTGAACGCCGACGTCTGCGAGATCTACTCCGATGTGGAC 531

Qy       4510 GTGGTGCATACCTACGACAAACTGCT 4535
             |  ||| | ||    |||   | | |
Db        532 GGTGTGTACACGGCGGACCCGCGGGT 557


RESULT 11
US-10-793-626-3998/c
; Sequence 3998, Application US/10793626
; Publication No. US20050255478A1
; GENERAL INFORMATION:
;  APPLICANT: KIMMERLY, WILLIAM JOHN
;  TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
;  FILE REFERENCE: PU3480US
;  CURRENT APPLICATION NUMBER: US/10/793,626
;  CURRENT FILING DATE:  2004-03-04
;  PRIOR APPLICATION NUMBER: 60/164,258
;  PRIOR FILING DATE: 1999-11-09
;  NUMBER OF SEQ ID NOS: 4472
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3998
;   LENGTH: 3454
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic
;   OTHER INFORMATION: nucleic acid sequence
US-10-793-626-3998

  Query Match             0.6%;  Score 39.6;  DB 1;  Length 3454;
  Best Local Similarity   54.9%;  Pred. No. 1.1;
  Matches   78;  Conservative    0;  Mismatches   64;  Indels    0;  Gaps    0;

Qy        550 CTCGATCTCGCCTGTGCAGTGGAAATGGTGCACGCGGCATCGCTGATTCTGGATGACATT 609
              ||  ||   || | ||| |||||||| | ||  |     ||  | ||||  |||||  |
Db        165 CTAAATAGTGCTTTAGCATTGGAAATGATTCATACTTATTCTTTAATTCATGATGATTTA 106

Qy        610 CCCTCGATGGATAACGCGCAGATGCGTCGTGGTCGCCCTACCGTGCATCGCGAATTTGGT 669
              ||  | ||||||||  |    |    ||| | ||        ||    |||   |  | ||||
Db        105 CCAGCAATGGATAATGACGATTACCGTAGAGGAAAATTAACAAATCATAAAGTTTATGGT 46

Qy        670 GAAAACGTGGCGATTCTCGCCG 691
              |||      || ||||| || |
Db         45 GAATGGAAAGCCATTCTTGCTG 24


RESULT 12
US-11-152-747-3
; Sequence 3, Application US/11152747
; Publication No. US20050251881A1
; GENERAL INFORMATION:
;  APPLICANT: E. I . du Pont de Nemours, Inc.
;  APPLICANT:  Cheng, Qiong
;  APPLICANT:  Tao, Luan
;  TITLE OF INVENTION: CAROTENOID KETOLASE GENE
;  FILE REFERENCE: CL-1849 US NA
;  CURRENT APPLICATION NUMBER: US/11/152,747
;  CURRENT FILING DATE:  2005-06-14
;  PRIOR APPLICATION NUMBER:
;  PRIOR FILING DATE:
;  NUMBER OF SEQ ID NOS: 47
;  SOFTWARE: Microsoft Office 97
; SEQ ID NO 3
;   LENGTH: 1536
;   TYPE: DNA
;   ORGANISM: Deinococcus radiodurans R1
US-11-152-747-3

  Query Match             0.5%;  Score 38.4;  DB 7;  Length 1536;
  Best Local Similarity   48.2%;  Pred. No. 1.5;
  Matches  108;  Conservative    0;  Mismatches  116;  Indels    0;  Gaps    0;

Qy       4297 CATGCGCTGGAGCGTGAATGGGGCGTGTGGTTTCCGCGCGGCGGCACCGGCGCGCTGGTG 4356
              ||  ||||  | |  ||| | ||||||  |   ||    ||||||| |||||  |||
Db        634 CACCCGCTCTACCACGAAGGCGGCGTGGCGCGGCCCAAAGGCGGCAGCGGCGGCCTGACC 693

Qy       4357 CAGGGCATGGCGCGACTGTTCGAGGACTTGGGCGGCGAGCTGTTACTGAATGCCGAAGTG 4416
              | | | ||   ||       ||||| |   ||||||||| | ||      | ||    ||
Db        694 AAAGCCCTGCGCCGGGCCACCGAGGCCGAAGGCGGCGAGGTCTTCACCGACGCGCCGGTC 753

Qy       4417 AGCCAGCTGGAAACCAGCGGCAATCGCATTAGCGGCGTTCAGTTAGAGGGCGGACGACGC 4476
              |   | |      ||  | |             ||| | | | | ||  ||||
Db        754 AAGGAAATTCTGGTCAAGGACGGCAAGGCGCAGGGCATCCGGCTGGAAAGCGGCGAGACG 813

Qy       4477 TTCGATGCCGCCGCTGTGGCCTCCAATGCCGACGTGGTGCATAC 4520
              | |   |||  ||| || |  ||    | | || |  ||   ||
Db        814 TACACCGCCCGCGCCGTCGTGTCGGGCGTCCACATCCTGACCAC 857


RESULT 13
US-10-802-796-545
; Sequence 545, Application US/10802796
; Publication No. US20050250104A1
; GENERAL INFORMATION:
;  APPLICANT: COLE, STEWART
;  APPLICANT:  BUCHRIESER-BROSCH, ROLAND
;  APPLICANT:  GORDON, STEPHEN
;  APPLICANT:  BILLAULT, ALAIN
;  TITLE OF INVENTION: A METHOD FOR ISOLATING A POLYNUCLEOTIDE OF INTEREST
;  TITLE OF INVENTION:  FROM THE GENOME OF A MYCOBACTERIUM USING A BAC-BASED
;  TITLE OF INVENTION:  DNA LIBRARY. APPLICATION TO THE DETECTION OF
;  TITLE OF INVENTION:  MYCOBACTERIA.
;  FILE REFERENCE: 05394.0011-00000
;  CURRENT APPLICATION NUMBER: US/10/802,796
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;  CURRENT FILING DATE:  2004-03-18
;  PRIOR APPLICATION NUMBER: US/09/673,476
;  PRIOR FILING DATE: 2002-03-29
;  PRIOR APPLICATION NUMBER: PCT/IB99/00740
;  PRIOR FILING DATE: 1999-04-16
;  PRIOR APPLICATION NUMBER: 09/060,756
;  PRIOR FILING DATE: 1998-04-16
;  NUMBER OF SEQ ID NOS: 743
;  SOFTWARE: PatentIn Ver. 2.2
; SEQ ID NO 545
;   LENGTH: 425
;   TYPE: DNA
;   ORGANISM: Mycobacterium tuberculosis
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (30)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (57)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (111)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (180)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (185)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (197)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (288)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (356)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (359)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (385)
;   OTHER INFORMATION: a, t, c or g
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (402)
;   OTHER INFORMATION: a, t, c or g
US-10-802-796-545

  Query Match             0.5%;  Score 38.2;  DB 1;  Length 425;
  Best Local Similarity   58.2%;  Pred. No. 0.97;
  Matches   64;  Conservative    0;  Mismatches   46;  Indels    0;  Gaps    0;

Qy       5650 ATTTAGGACTGGCGTTCCAGCTCACTAACATTGCGCGCGACATTGTAGAAGATGCCGAAA 5709
             | || ||| | ||  | |||| || | |||  ||||||| ||  ||| ||        |
Db          3 AGTTGGGAATCGCTCTGCAGCAAACCANTATTCTGCGCGACGTTCGAGAGGACTNTTTGA 62

Qy       5710 ATGGTCGCTGCTATCTGCCGCAATCCTGGCTCGATCAGGCGGGATTACGC 5759
             |||| ||   ||| |||||||    |  ||| || |     ||  ||| |
Db         63 ATGGACGGATCTACCTGCCGCGCGACGAGCTGGACCGATTAGGCGTACNC 112


RESULT 14
US-10-392-234A-49/c
; Sequence 49, Application US/10392234A
; Publication No. US20050255538A1
; GENERAL INFORMATION:
;  APPLICANT: Pharmacia and Upjohn Corporation
;  APPLICANT:  Buxser, Steven
;  APPLICANT:  Poole, Keith
;  APPLICANT:  Decker, Douglas
;  APPLICANT:  Xiaznhi Li
;  TITLE OF INVENTION: Method for Screening for acrAB Transporter Family Inhibitors
;  FILE REFERENCE: 6206
;  CURRENT APPLICATION NUMBER: US/10/392,234A
;  CURRENT FILING DATE:  2003-03-17
;  PRIOR APPLICATION NUMBER: US 60/364,935
;  PRIOR FILING DATE: 2002-03-15
;  NUMBER OF SEQ ID NOS: 67
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 49
;   LENGTH: 1176
;   TYPE: DNA
;   ORGANISM: Pseudomonas aeruginosa
US-10-392-234A-49

  Query Match             0.5%;  Score 37.4;  DB 1;  Length 1176;
  Best Local Similarity   48.4%;  Pred. No. 2.4;
  Matches  104;  Conservative    0;  Mismatches  111;  Indels    0;  Gaps    0;

Qy        972 CTTCGCCCAGGATTTGGGCCAGGCGTTTCAACTGCTCGACGACCTCGCCGACGGTTGCAA 1031
              | ||| || ||||      || |  |   ||||  | || |||    || | | ||  || |
Db        559 CGTCGGCCGGGATGGTTTCCGGCAGCCACAACGCCACGCCGAGGCCGGCCAGGGCGGCGA 500

Qy       1032 ACACACCGGTAAAGATGTGCACCAGGATCAGGGCAAATCCACGCTGGTACAGATGCTCGG 1091
              |||          ||| |   | |     |  | |     |  | |   |||     |||
Db        499 ACAGGGTCAGGCAGACGAAGATCGATTGCCAGCCCTGCCAGTCCAGCAGCAGGCCGCCGG 440

Qy       1092 TGCTGACGGCGCGGAACGTCGCCTGCGCGATCACCTGCGCAGCGCAGATGCACACCTTGC 1151
                |  |||| ||| || |||| |  | ||||||  ||         |    || |||||
Db        439 CCACGGGGGCGAGGATCGGCGCCAGGCCCATCACCAGCATCAACTGGGAAAACGCCTTGG 380

Qy       1152 CTGCGCCTGCCATCGCGGCATCGCCACTCGCCAAT 1186
              | |||||   |    ||     | ||| | ||| |
Db        379 CGGCGCCGATCGGATCGCACAGGTCACGCACCACT 345


RESULT 15
US-11-054-385-3
; Sequence 3, Application US/11054385
; Publication No. US20050257291A1
; GENERAL INFORMATION:
;  APPLICANT: MIZUTANI, Masako
;  APPLICANT:  TANAKA, Yoshikazu
;  APPLICANT:  KUSUMI, Takaaki
;  APPLICANT:  SAITO, Kazuki
;  APPLICANT:  YAMAZAKI, Mami
;  APPLICANT:  ZHIZHONG, Gong
;  TITLE OF INVENTION: GENES ENCODING PROTEINS HAVING TRANSGLYCOSYLATION
;  TITLE OF INVENTION:  ACTIVITY
;  FILE REFERENCE: 001560-350
;  CURRENT APPLICATION NUMBER: US/11/054,385
;  CURRENT FILING DATE:  2005-02-10
;  PRIOR APPLICATION NUMBER: US/09/147,955
;  PRIOR FILING DATE: 1999-03-24
;  PRIOR APPLICATION NUMBER: PCT/JP98/03199
;  PRIOR FILING DATE: 1998-07-16
;  PRIOR APPLICATION NUMBER: JP 9-200571
;  PRIOR FILING DATE: 1997-07-25
;  NUMBER OF SEQ ID NOS: 12
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
;   LENGTH: 1474
;   TYPE: DNA
;   ORGANISM: Perilla frutescens
;   FEATURE:
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;   NAME/KEY: CDS
;   LOCATION: (29)..(1357)
US-11-054-385-3

  Query Match             0.5%;  Score 37.4;  DB 7;  Length 1474;
  Best Local Similarity   58.6%;  Pred. No. 2.7;
  Matches   65;  Conservative    0;  Mismatches   46;  Indels    0;  Gaps    0;

Qy       2202 TTTATCACTCATGCCGGGTTAAACAGCGCGCTGGAAGCACTGGAATGCGGTACGCCGATG 2261
              ||  | || |||   ||||  |||    ||  ||||     ||   ||||| |  ||| ||
Db       1082 TTCGTGACGCATTGTGGGTGGAACTCGGCTGTGGAGAGCTTGAGTTGCGGGATTCCGGTG 1141

Qy       2262 CTGGCGCTGCCGATTGCTTTTGATCAGCCCGGCGTGGCGGCGCGCATTGAG 2312
              ||||| |||||      ||||||||| |       |||  ||  ||||||
Db       1142 GTGGCGGTGCCGCAGTGGTTTGATCAGACGACGAATGCGAAGCTGATTGAG 1192


Search completed: November 25, 2005, 06:55:21
Job time : 555 secs
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